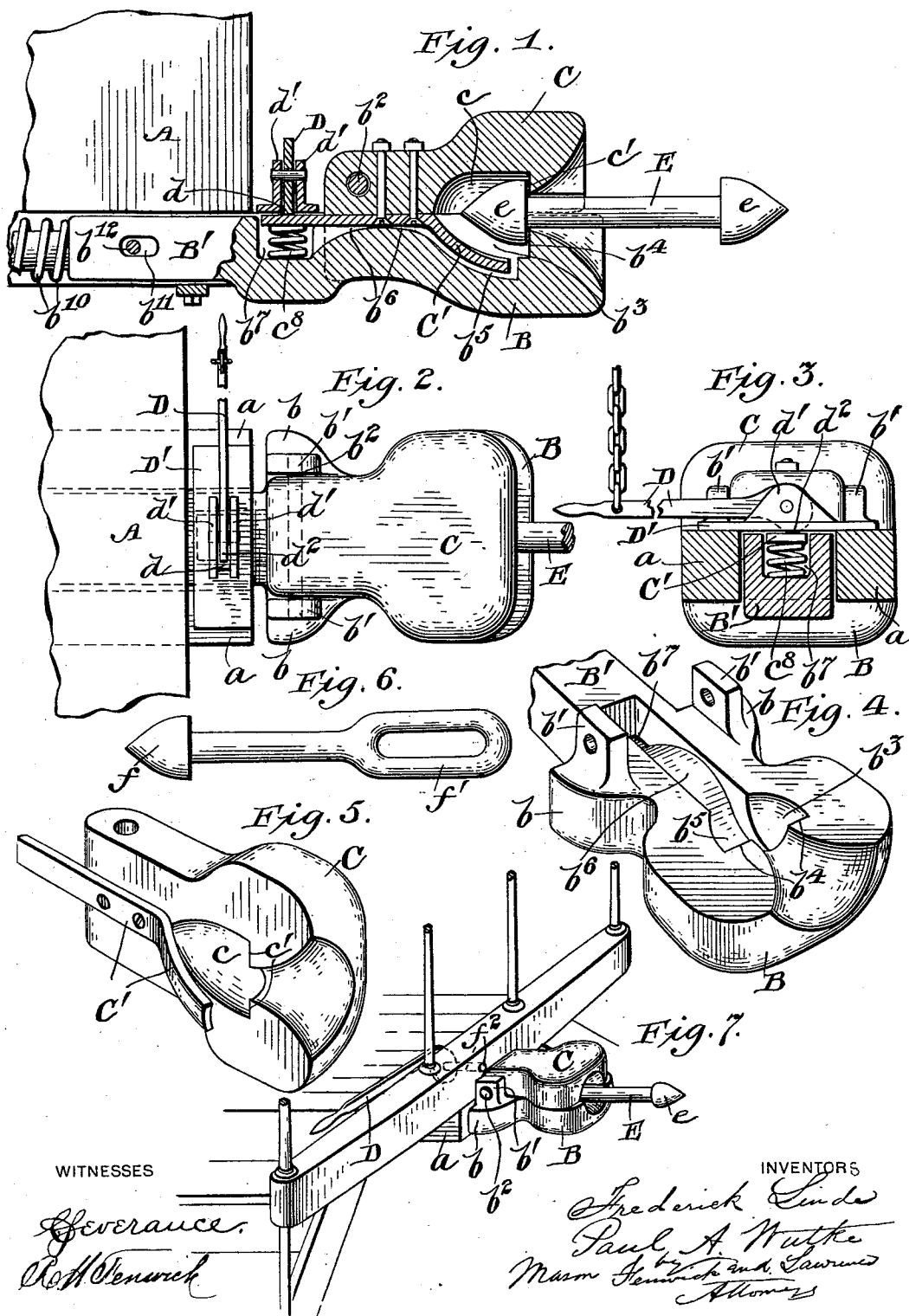


(No Model.)

F. LINDE & P. A. WUTKE.
CAR COUPLING.

No. 561,006.

Patented May 26, 1896.



UNITED STATES PATENT OFFICE.

FREDERICK LINDE AND PAUL A. WUTKE, OF DONALDSONVILLE,
LOUISIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 561,006, dated May 26, 1896.

Application filed March 28, 1896. Serial No. 585,260. (No model.)

To all whom it may concern:

Be it known that we, FREDERICK LINDE and PAUL A. WUTKE, citizens of the United States, residing at Donaldsonville, in the parish of Ascension and State of Louisiana, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in car-couplers; and it consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a central vertical section through one of the coupling draw-heads embodying our invention applied to a freight-car. Fig. 2 represents a top plan view of the same. Fig. 3 represents a rear elevation, partly in section, of one of the draw-heads of said coupling. Fig. 4 represents a detail perspective view of the lower jaw of the coupling. Fig. 5 represents a detail perspective view of the upper pivoted jaw of the coupling. Fig. 6 represents a detail side elevation of a modified form of coupling-link to be used with one of our coupling draw-heads and an ordinary coupling; and Fig. 7 represents a detail perspective view of the end of a passenger-car platform, showing our invention applied thereto.

A in the drawings represents the car; B, the lower jaw of the coupling draw-heads; C, the upper pivoted jaw; D, the uncoupling cam-lever, and E the coupling-link.

The lower jaw B of each draw-head is provided with heavy laterally-extending lugs or projections b , which are adapted to abut against the end beam of the car-frame A in the act of coupling. It is also provided with upwardly-extending lugs b' , in which the respective ends of a shaft b^2 , on which the jaw C is loosely mounted, are secured. The upper surface of the jaw B is preferably flattened, so that the lower flattened surface of the jaw C will lie smoothly upon it when the two are together. The forward portions of both jaws are constructed to form the usual beveled

circular flared opening to admit the arrow-head e of the coupling-link. A recess b^3 is formed in the upper surface of the lower jaw B to receive the arrow-head e of the link. A square shoulder b^4 is provided by the formation of this recess for the squared head e of the link to catch upon. Just back of the recess b^4 is formed another and deeper recess b^5 for the accommodation of the lower outer free end of a stout link-lifting lever C' , hereinafter more fully described. A groove b^6 is cut backward from the last-mentioned recess to a spring-retaining recess b^7 to permit of the movements of said lever C' . The upper jaw C, as before described, is pivotally mounted upon shaft b^2 between the lugs b' of the jaw B, so as to be capable of having its outer end forced upward by the arrow-head of the coupling-link to permit the head to enter a recess c , formed in the under side of the said jaw. The formation of this recess c leaves a square shoulder c' , similar to shoulder b^4 , for the upper half of the arrow-head of the link to catch against. The lifting-lever C' is bolted to the under side of the jaw C, and its forward end is inclined downward and curved in cross-section, so as to exactly fit the contour of the link-head under which it lies, and which it is intended to elevate when the said jaw C is raised. The said lever C' extends rearwardly, with its end terminating immediately over the spring-recess b^7 . The said recess b^7 is of such depth that in order to maintain the required strength of the draw-head a bulge is formed in the casting just below the bottom of the recess. A coil-spring c^8 is mounted in said recess and bears with its upper end against the rear end of the said lever C' , and the jaw C is thus normally held down tight upon the jaw B and prevented from shaking or rattling unduly. A plate D' is secured to the top of the projecting ends a of the longitudinal beams of the car directly over the end of the lever C' . This plate is provided with an aperture d directly over the rear end of the lever C' and lugs d' d' on each side of said aperture. The lever D, having a cam end d^2 , is pivoted between said lugs. When said lever is in a horizontal position, its cam end does not project through the aperture d ; but when it is raised into a vertical

position the said cam end is projected and engages the end of the lever C' and pushes it down. This movement raises the jaw C and disengages it from the arrow-head of the link, or the link from the shoulder of the recess therein. As the jaw C moves upward the forward end of the lever C' engages the under side of the link-head and raises the same clear of the shoulder b^4 of the recess in the jaw B. The jaw B is extended rearwardly to form a draw-bar B'. This bar is mounted in the usual manner, with a spring-buffer b^{10} to receive the shock in coupling. The bar is guided by a slot-and-pin connection b^{11} and b^{12} . The said jaw B protrudes forward of the jaw C, so that the concussion of coupling comes on the said jaw B alone, and the jaw C and its pivotal connection are thus relieved of any injurious shock. Any suitable chains or rods may be connected to the lever D, whereby it may be operated either from the side or the top of the car. The forward downwardly-inclined end of the lever C' is not a light or springy structure, but is firm and solid, so that the link may be accurately and positively lifted to the desired height to clear the shoulder b^4 by the raising of the jaw C. We contemplate employing a link similar to that shown in Fig. 6 when a car provided with our improved coupling draw-heads is coupled to a car provided with the ordinary link-and-pin coupling. In this link a head f is formed upon one end to engage the jaws B and C, and a loop f' upon the other end to be engaged by the coupling-pin.

In the application of our invention to a passenger-car, as shown in Fig. 7, the plate D' is omitted and the cam-lever is mounted upon a pin f^2 , secured in a portion of the platform-frame. In this case the cam end of the lever projects through a suitable aperture cut in the platform, so as to engage the end of the lever C'.

Our improvement can be substituted for the old coupling without altering or making any changes in the cars other than substituting our coupling draw-heads for old ones, and that, too, in a very short time.

The construction of our improved coupler is very simple and cheap, and yet it is perfect in action and will effectively resist the great shocks that all couplers are subjected to and not be liable to breakage of the parts.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupler, the combination with a lower jaw, of a hinged upper jaw, said jaws

constituting the draw-head, a link-lifting lever attached to said latter jaw and projecting to the rear of the same, a spring acting on said lever for keeping the jaw normally closed, and a cam-lever adapted to engage said lifting-lever to raise the upper jaw and disengage the coupling-link, substantially as described.

2. In a car-coupler, the combination with a lower jaw forming one part of the draw-head, and having laterally-extending projections and upwardly-extending lugs, of an upper jaw forming the other part of the draw-head, and pivoted between said lugs, a link-lifting lever attached to said latter jaw, and means for lifting said jaw to disengage the coupling-link, substantially as described.

3. In a car-coupler, the combination with a lower jaw, of an upper jaw pivoted thereto, but being shorter than the same, said jaws constituting the draw-head, and applied so that the shock of concussion is received by the lower jaw alone a link-lifting lever attached to the upper jaw, and means for lifting said upper jaw, substantially as described.

4. In a car-coupler, the combination with a lower jaw forming one part of the draw-head and having laterally-extending attaching projections, upwardly-extending lugs and a spring-receiving recess, an upper jaw forming the other part of the draw-head and pivoted between said lugs, a link-lifting lever attached to said latter jaw and projecting to the rear of the same over the spring-recess, a coil-spring in said recess and bearing against said lever, and a cam-lever for depressing the rear end of the link-lifting lever to lift the upper jaw and release the coupling-link, substantially as described.

5. In a car-coupler, the combination with a lower jaw forming one part of the draw-head and having a rearwardly-extending draw-bar, a spring attached to said draw-bar to resist shocks, an upper pivoted jaw forming the other part of the draw-head, a link-lifting lever attached to said latter jaw and projecting to the rear of the same, a spring connecting said lever and the lower jaw to hold the jaws normally closed, and a cam-lever for depressing the end of the lifting-lever to uncouple, substantially as described.

In testimony whereof we hereunto affix our signatures in presence of two witnesses.

FREDERICK LINDE.

PAUL A. WUTKE.

Witnesses:

R. McCULLOH,

H. O. MAHER.