No. 632,904. Patented Sept. 12, 1899.

W. L. STONESIFER.

CAR COUPLING.

(Application filed Apr. 4, 1899.)

(No Model.)

FIG. 1.

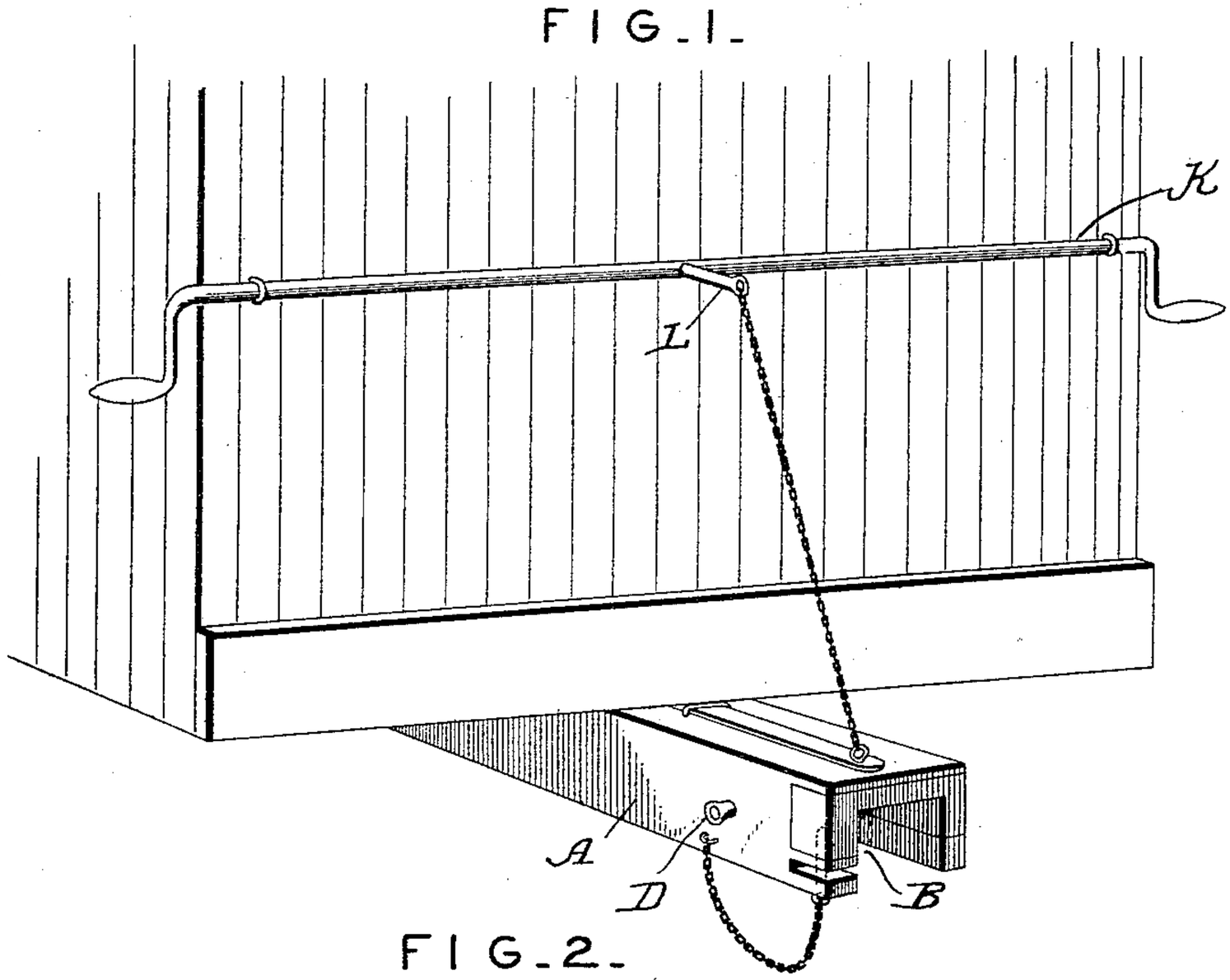


FIG. 2.

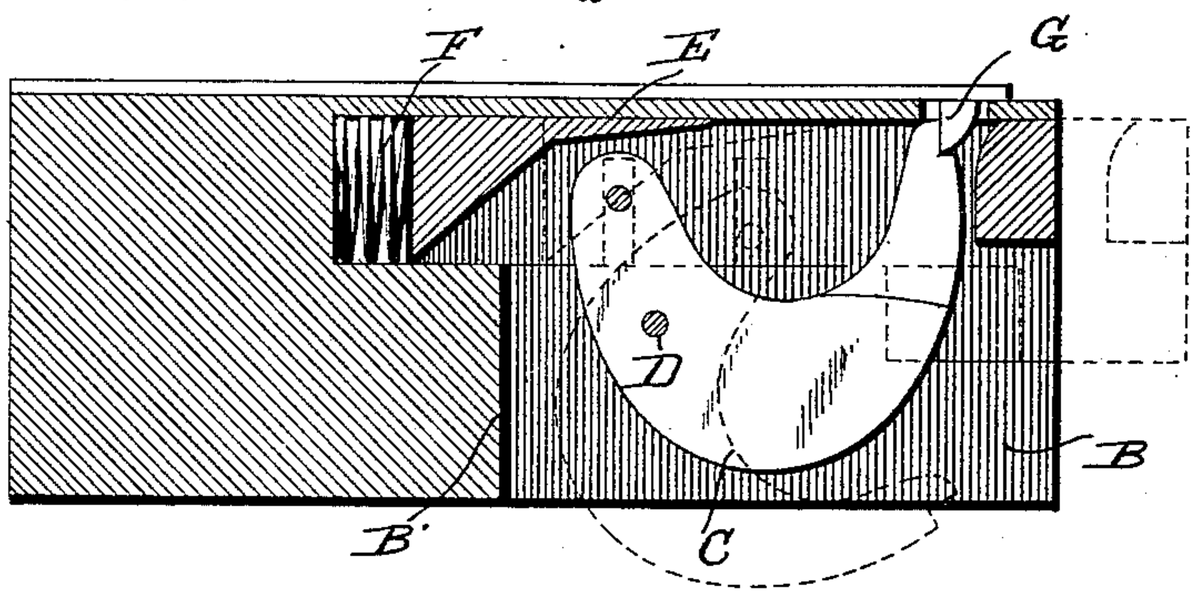


FIG. 3.

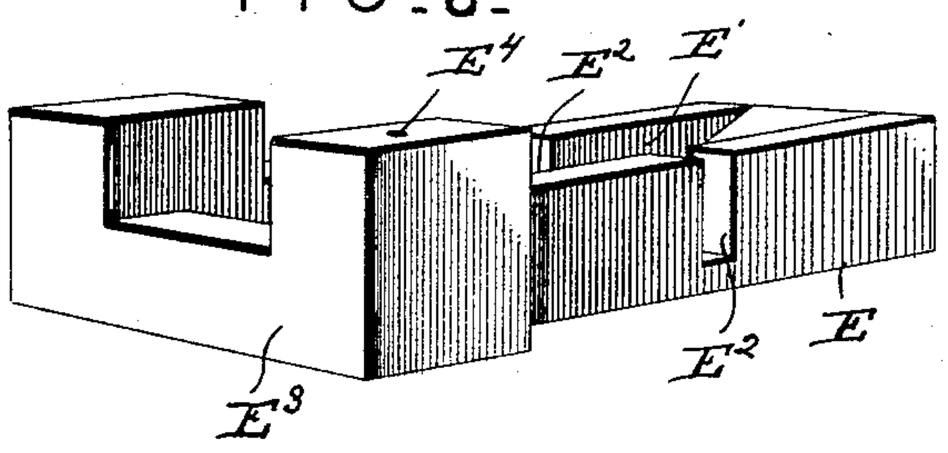
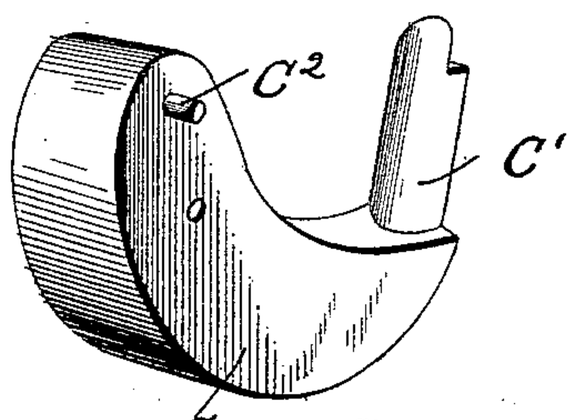


FIG. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM L. STONESIFER, OF DAUPHIN, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 632,904, dated September 12, 1899.

Application filed April 4, 1899. Serial No. 711,700. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. STONESIFER, a citizen of the United States, residing at Dauphin, in the county of Dauphin and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in automatic car-couplers.

The invention has for its object the construction of a coupler of the above-named character which will be simple in its parts, adapted to resist the great strain to which such devices are ordinarily subjected, and be thoroughly efficient in its operation by reason of the positive working of the interlocking means.

The invention consists of the construction and arrangement of parts hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a perspective view showing one end of a car with the invention applied thereto; Fig. 2, a longitudinal vertical sectional view taken through the draw-bar and showing in full line the coupling-hook in its raised or coupled position, the position of said hook and its operating slide or buffer being also shown in their normal positions by dotted lines; Fig. 3, a perspective view of the slide by which the coupling-hook is operated, the same being shown inverted; and Fig. 4, a perspective view of the coupling-hook.

Referring to the drawings, A indicates the draw-bar of a railway-car and is connected with the car in the usual or any desirable manner. The coupling end of said draw-bar is cast or otherwise formed with the hollow or recess B opening through the under side and at the end of the draw-bar, in which is mounted to swing vertically a coupling-hook or curved lever C on the shaft or pin D. The said hook or lever is preferably formed as shown in Fig. 4, having a curved body portion of considerable weight and thickness and an end projection C′ adapted to extend through the coupling-link shown in dotted lines thereon. The pin D, which forms the fulcrum for the hooks C, extends through the same approximately on a horizontal line with the base of the projection C′, which not only provides for the strain or pull brought onto the hook to be in a direct line through the body portion, but also provides a rear portion extending from said fulcrum to the rear end of the hook, which practically forms the operating-arm of the said hook or lever and is provided with lugs or pins C^2 on each side thereof near its end, which are engaged by the slide E and operated therethrough. The said slide E is fitted within the recess D and is adapted to receive the said hook or lever in a longitudinal recess E′, formed therein from its under side, and the said lugs or pins C^2 are adapted to fit within vertical slots E^2 in the side walls of the said slide and have a vertical movement therein as the slide advances or retreats. A buffer or head E^3 is provided at the outer end of the slide E, which buffer or head normally projects beyond the end of the draw-bar and is kept in its advanced position by virtue of the coil-spring F, seated in the rear end of said slide and receives the impact of the corresponding buffer or head of the coupler of the adjacent car when the cars are brought together. With the said slide E in its advanced position, as shown in dotted lines in Fig. 2, it will be seen that its action on the hook or lever in advancing to said position would be to cause the hook or lever to assume the drop position also shown in dotted lines in Fig. 2. The weight of the hook will assist the forward movement of the slide by seeking its center of gravity, thus requiring less tension in the spring F than would otherwise be necessary, and when in this position will lock the slide against advancing too far by virtue of the engagement of said hook with the rear wall B′ of the recess, in which it operates. The hook or lever C being normally in its dropped position, it will be seen that the action of the slide operating on the lugs C^2 will be to cause the said lugs to rise in the slots E^2 as they are carried backward and raise the projection C′ into engagement with the rear face of a latch G, carried by a flat

spring H, secured to the upper outer face of the draw-bar, which latch projects through an opening I, formed therein. A crank-shaft K, secured to the front end of the car, having the cranks thereof to project out at the sides or otherwise disposed for manipulation without entering between the car and having an arm L projecting from said shaft and connecting with the spring-latch by a chain M, forms an efficient means for releasing the hook from its coupled position; but it is obvious that other means may be employed for effecting the release of the coupling-hook.

When the buffer or head E^3 of the slide is forced back into the recess made therefor, it may be so held by means of a pin N, chained to the coupling or draw bar and inserted through the projecting portion of one of the sides and into an opening E^4 in the under face of the head.

By the construction herein described a coupler is produced of great strength and simplicity and operating automatically in the coupling operation and depending solely for such operation on the positive and ever-present pressure exerted by the cars on coming together.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A car-coupler comprising a draw-bar having an outer hollow or recessed head opening through the bottom, a spring-actuated slide mounted in the upper part of the draw-bar and having slots in the opposite sides thereof, a coupling hook or lever pivotally mounted in the draw-bar and provided with pins or projections engaging the slots in the said slide, and a latch to hold the coupling hook or lever in locked position.

2. A car-coupler comprising a draw-bar having an outer hollow or recessed end opening through the bottom, a slide fitted in the recess of the draw-bar and having a longitudinal recess, a vertically-swinging coupling-hook arranged to have a bodily vertical movement as the slide reciprocates, and provided with curved body portion and projecting portion to extend through a coupling-link, and lugs projecting from opposite sides and working vertically in slots in the sides of the slide as the latter advances and recedes, a spring for normally throwing said slide forward, and a latch for holding the same in rearmost position, substantially as specified.

In testimony whereof I have affixed my signature in presence of two witnesses.

WM. L. STONESIFER.

Witnesses:
GEORGE W. HECK,
GEORGE STRAW.