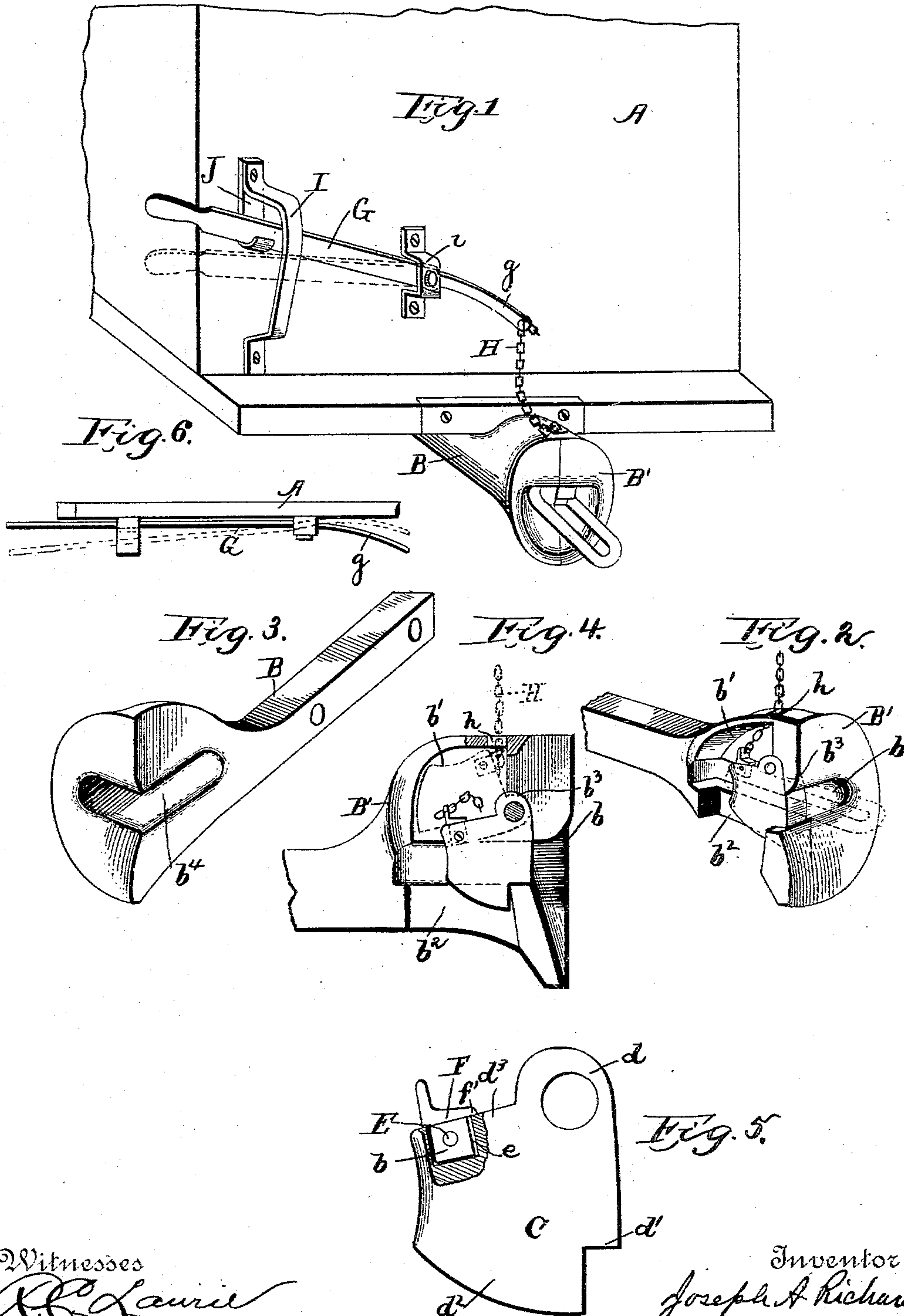


(No Model.)

J. A. RICHARD.
CAR COUPLING.

No. 356,601.

Patented Jan. 25, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH A. RICHARD, OF ST. LOUIS, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 356,601, dated January 25, 1887.

Application filed November 8, 1886. Serial No. 218,309. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. RICHARD, a citizen of the United States, residing at St. Louis, in the county of Gratiot and State of Michigan, have invented certain new and useful Improvements in Car-Couplings; 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved car-coupling; and it consists in the novel features more fully hereinafter set forth and claimed.

In the drawings, Figure 1 is a perspective view of one end of a car provided with my improved coupler. Fig. 2 is a perspective view of one part of the coupler. Fig. 3 is a perspective view of the other or corresponding part of the coupler. Fig. 4 is a side view of the front portion of one part of the coupler, showing the coupling-pin in position. Fig. 5 is a side view, parts broken away, of the coupling-pin. Fig. 6 is a detail view showing the outline of the lever.

The object of the invention is to devise a simple, economical, and efficient coupling which will be automatic in its operation and couple the cars when run together without the necessity of the brakeman going between them for the purpose, and to combine therewith a simple system of releasing devices, whereby the cars can be quickly uncoupled from the side and the pin held up out of the way, if so desired.

The car A may be of any approved form, and the coupler applied thereto in any of the well-known ways. The coupler comprises two parts, B and B'. The part B' has the outer end, which is expanded, provided with a longitudinal depression, *b*, from which the recess *b'* extends in an upward direction, and the slot *b''* projects in a downward direction. The recess *b'* is extended forward near its lower front corner, forming the offset *b'''*. The part B' has its outer end correspondingly expanded and provided with a depression, *b''''*, which, with the coincident depression *b*, forms the link-receiving pocket.

The coupling-pin C is of the gravity-operating type, and is pivotally supported at its upper end above the link-receiving pocket. Said end *d* is rounded to snugly fit the curved wall of the offset *b'''*. The pin is of sufficient length to extend across the link-receiving pocket, and its lower forward corner is cut away, forming the shoulder *d'*, which is adapted to rest upon the bottom of the link-receiving pocket forward of the slot or opening *b''*. The portion *d''* below the shoulder *d'* extends within the opening *b''*, so that its front edge may obtain a purchase upon the front wall of the opening. The rear edge of the pin is rounded to fit the inner side of the end of the link, and that portion of the top in the rear of the rounded portion is extended, forming the flat surface *d'''*, in which a socket, *e*, is formed to receive the end or shank *f* of the eyebolt F, which has a flange, *f'*, overlapping the junction between the shank and walls of the socket. Said eyebolt is secured in place by the pin E passing through the shank and the sides of the coupling-pin on each side of the socket.

The recess *b'* is sufficiently large to receive the pin when thrown up out of the way of the link when the latter is entering or leaving. The opening or slot *b''* is directly beneath the recess, to permit the removal and replacement of the pin in case of repairs, and also to form an exit for dirt and any foreign matter which may accidentally lodge in the link-receiving recess.

The coupling-pin normally hangs across the link-receiving pocket, so that when the link enters it the pin will turn up out of the way, ride over the end of the link, and drop down in front of said end and retain the link in position till released, which is accomplished by the hand-lever G, pivoted to the end of the car, so that the inner end is directly over the coupler and the outer end projects beyond the side of the car. The inner end is connected with the coupling-pin by the cord or chain H, fastened at its outer end to the end of the lever, and at its inner or lower end to the eyebolt F of the pin. The cord or chain passes through an opening, *h*, in the top of the part B, which opening extends into the recess *b'*. The outer end of the lever passes through the keeper I, which limits its movements. When resting

upon the lower part of the keeper, the coupling-pin is held up out of the way, and when held near the top of the keeper the coupling-pin occupies its normal pendent position. The hook J, held between the car and the end of the keeper, supports the hand-lever in its elevated position. The hand-lever is held in place at its fulcrum by the clip *i* in such manner that it can have a vertical movement, as when operating the coupling-pin, and a lateral motion, by which it can be engaged with or disengaged from the hook J. The inner end, *g*, of the hand-lever is curved to permit this lateral motion.

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

20 1. The combination of the coupler made in two parts, each part having a coincident depression in its adjacent face, forming a link-receiving pocket, and the one part having a recess projecting above and an opening extending below said depression, the lower for-

ward corner of the recess being extended and forming the rounding offset, the coupling-pin 25 having a curved end fitting said offset, and a lower portion extending within said opening and having a shoulder projecting over the lower wall of the link-receiving recess forward of the opening, and having a flat upper surface 30 provided with a socket, and the eyebolt removably seated in said socket, and means, substantially as described, for operating said coupling-link, substantially as set forth.

2. The combination, with the coupling-pin 35 having a socket formed in its upper edge, of the eyebolt having a shank fitted in said socket and removably held therein, and having an overlapping flange, and the pin, substantially as and for the purpose described. 40

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

JOSEPH A. RICHARD.

Witnesses:

AMOS H. SCOTT,

FRANK J. GRINNELL.