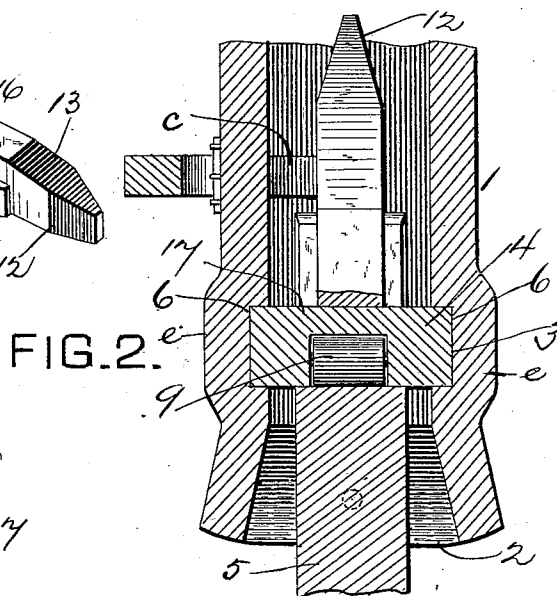
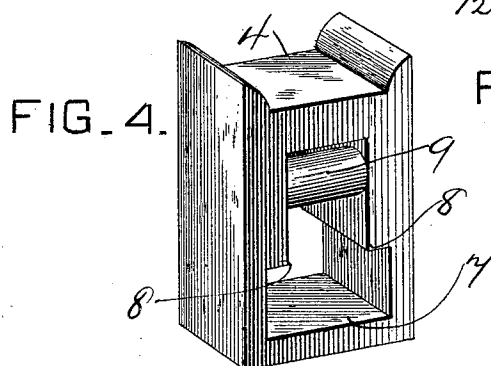
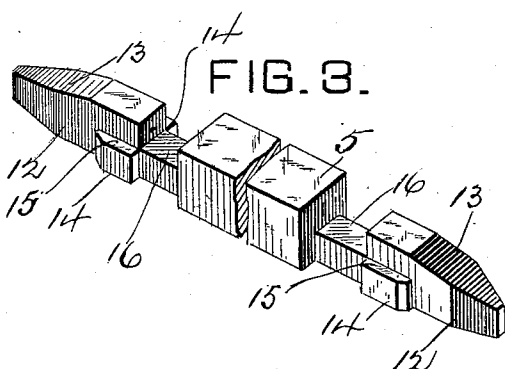
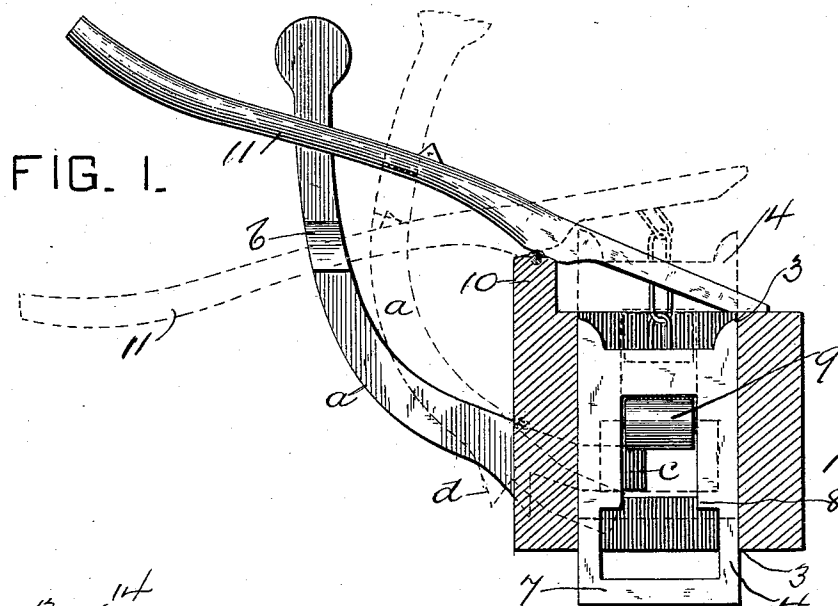


(No Model.)

W. MIGGETT.
CAR COUPLING.

No. 484,939.

Patented Oct. 25, 1892.



ATTEST

a. R. Brown
L. B. Jones.

INVENTOR

William Muggett
By Chas J. Gooch
attorney

UNITED STATES PATENT OFFICE.

WILLIAM MIGGETT, OF PHILADELPHIA, PENNSYLVANIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 484,939, dated October 25, 1892.

Application filed February 10, 1892. Serial No. 421,065. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MIGGETT, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and I 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.

This invention relates to improvements in automatic car-couplings.

My improved coupling, briefly described, consists of a coupling-bar having a beveled nose to facilitate its entrance into the draw-head, disengage the locking-slide-operating lever, and raise the locking-slide, said coupling-bar having a notched portion rearwardly of its nose to receive the locking bolt or slide, and side wings or lugs forwardly of said notched portions, and a vertically-reciprocating bolt having a central way and side wings to adapt the same to fit over and within the notched portion of the coupling-bar and bear against the wings or lugs thereon, whereby a triple grip is afforded the coupling-bar, said bolt or slide being interiorly provided with a roller to facilitate the entrance into locking position of the bar, and being provided with a hand-lever having link connection with said bolt or slide and with the draw-bar to permit of said bolt or slide being raised by hand from the side of the car, a lever being pivoted in the side of the draw-bar and adapted to engage the slide or bolt-raising lever to hold the same down and the slide or bolt in raised or unlocking position.

In the accompanying drawings, Figure 1 represents a front elevation, partly in section, of a draw-bar with my improved bar-locking slide or bolt and its accessories in position, the dotted lines indicating the positions assumed by the parts in their several positions of use and disuse. Fig. 2 represents a longitudinal section of a portion of a draw-bar with my improvements in position therein and with a coupling-bar in position. Fig. 3 represents a perspective view of one of my coupling-bars. Fig. 4 represents a perspective view of the locking slide or bolt.

The object of my invention is to provide a

coupling for cars which shall be automatic in its locking action, will operate with certainty to couple cars as they meet, will be securely held in locked position by reason of the triple grip, to be presently described, under all circumstances, and can be readily uncoupled from the side of the car whenever desired.

1 represents a draw-bar which has a bell-mouthed bevel-faced draw-head 2 to guide the coupling-bar to position of engagement with the coupling or locking bolt or slide on a pair of cars coming together. Rearwardly of the draw-head the draw-bar has in its top and bottom portions vertical slots or passages 3, within and through which the slide or bolt 4 for locking the coupling-bar 5 slides vertically, grooves 6 in the sides of the draw-bar serving to guide and steady the slide or bolt in its vertical movements. The locking bolt or slide 4 has at its bottom a cross-bar 7, which prevents, by reason of its impingement against the under side of the coupling-bar, the uncoupling of said slide and bar by the jolting of the cars.

On the inner side faces of the locking slide or bolt 4 are depending wings 8, with which, as will be presently explained, other wings or lugs on the coupling-bar engage, and 9 represents a roller journaled in the upper portion of said slide or bolt 4 to receive the impact of the nose of the coupling-bar and facilitate its entrance into the draw-bar.

10 represents a block on the top of the draw-bar on which the hand-lever 11 is fulcrumed. This hand-lever 11 is linked or otherwise secured to the top of the locking bolt or slide and extends out to the side, so as to permit of the said lever being forced down by any one standing on the track at the side of the car, so as to raise the slide 4 and uncouple the cars without going between them.

a represents a hand-lever pivoted to and extending from one side of the draw-bar and having a lug *b*, with which the slide or bolt-raising lever 11 is engaged to hold said lever 11 down and the slide or bolt 4 in raised position. This securing-lever *a* extends at its lower end, as at *c*, through one side of and within the draw-bar when in locked position, and has a lip *d* which limits the protrusion within the draw-bar of the lower end *c* of the lever *a*.

Upon a pair of cars having my coupling coming together the coupling-bar as it enters within the draw-bar will strike the end *c* of said lever *a* and force it out therefrom and thereby raise said lever out of engagement with the lever 11, and thus release said lever 11 and permit the slide or bolt 4 to drop so as to engage the coupling-bar. The sides of the draw-bar are strengthened by thickening the same, as shown at *e*, at the portion thereof where the locking bolt or slide 4 operates.

The coupling-bar 5 is preferably of similar construction at each end, as shown in Fig. 3, as thereby bars of such construction will be adapted for coupling at each end, though of course a bar of the form designed may, if desired, have only one end formed according to my improvements and have its other end plain and permanently secured to a car.

The end of my improved coupling-bar has a beveled side 12 and top faces 13, by which, in connection with the beveled shape of the draw-head, the entrance of said coupling-bar into the draw-head is facilitated when the cars come together. The beveled face 13, moreover, facilitates the rearward passage of the bar into locking position by engaging with the roller 9, and the beveled side 12 adapts the nose to engage and push out the end *c* of the lever *a*, as before explained. Rearwardly of the point of the bar and on each side are wings or lugs 14, having shoulders 15 or ledges. These shoulders or ledges 15 as the bar passes inward permit of the wings or lugs 14 passing freely under the wings 8 on the locking bolt or slide 4 when in raised position, or as said bolt or slide is forced upward by the coupling-bar on its entrance into the draw-bar. When the coupling-bar has entered to locking position, the locking slide or bolt 4 automatically drops down, so as to bring the wings 8 into engagement with the wings or lugs 14, thereby preventing the retraction of said coupling-bar until the locking bolt or slide 4 is raised by the lever 11. Rearwardly of the wings or lugs 14 the coupling-bar is cut away at each side and upper portion, so as to form side and upper notches 16. This notched formation serves as stops to prevent the unauthorized movement forwardly or rearwardly of the coupling-bar, the front wall of the upper notched portion impinging, when in locked position, against a bar 17 rearwardly of the roller. It will thus be seen that my improved coupling is entirely automatic in its action of locking, cannot be jolted out of locked position, can be readily released by hand from the side of the car, and is adapted for general use. It will also be seen that by reason of my peculiar construction of parts the coupling-bar has three points of gripping contact—viz., the side wings and the rear cross-bar—against which the retractive pull of the cars is exerted, thereby rendering the coupling both strong and secure.

The entire construction is simple and can

be cheaply manufactured. The coupling-bar can be cast integrally, as can also the locking bolt or slide, and there are no complicated parts to get out of order in use.

Having thus described my invention, what I claim is—

1. A car-coupling consisting of a draw-bar having a vertical passage-way therein, a locking slide or bolt adapted to reciprocate vertically within said way and having side wings on its inner walls, a hand-lever connected with said slide for the purpose of raising the same, and a coupling-bar having a notched portion and side wings adapted to engage with said locking slide or bolt, substantially as and for the purpose set forth.

2. The combination, with a draw-bar having rearwardly of the draw-head a vertical guideway, a vertically-reciprocating and automatically-operating bar-locking slide or bolt having top and bottom cross-bars, depending side wings on its inner sides, and a friction-roller journaled in its upper portion, a lever secured to said slide and adapted to raise the same to uncouple the bolt and bar, and a coupling-bar having beveled nose, lugs, or wings on its respective sides, and a notched or recessed portion rearwardly of said wings to adapt the same to engage said locking slide or bolt, substantially as and for the purpose set forth.

3. The automatic car-coupling herein described, consisting of a draw-bar having vertical openings in its upper and lower portions, a bar-locking slide having top and bottom cross-bars, inwardly-extending side wings, and a friction-roller, a sidewise-extending lever adapted to raise said slide out of locking position, and a coupling-bar having a notched portion adapted to engage said locking-slide and shouldered side wings to engage the side wings on said locking-slide, substantially as and for the purpose set forth.

4. The automatic car-coupling herein described, consisting of a draw-bar having vertical openings in its upper and lower portions, a bar-locking slide or bolt having top and bottom cross-bars, inwardly-extending side wings, and a friction-roller, a sidewise-extending lever adapted to raise said locking slide or bolt out of locking position, a lever adapted, as explained, to hold said slide-actuating lever in depressed position, and a coupling-bar having a notched portion adapted to engage said locking-slide and securing-lever and having shouldered side wings to engage the side wings on said locking slide or bolt, substantially as and for the purpose set forth.

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

WILLIAM MIGGETT.

Witnesses:

R. KENNEDY,
GEORGE W. HEINOLD.