

(No Model.)

T. MOSHER.  
CAR COUPLING.

No. 265,533.

Patented Oct. 3, 1882.

Fig. 1.

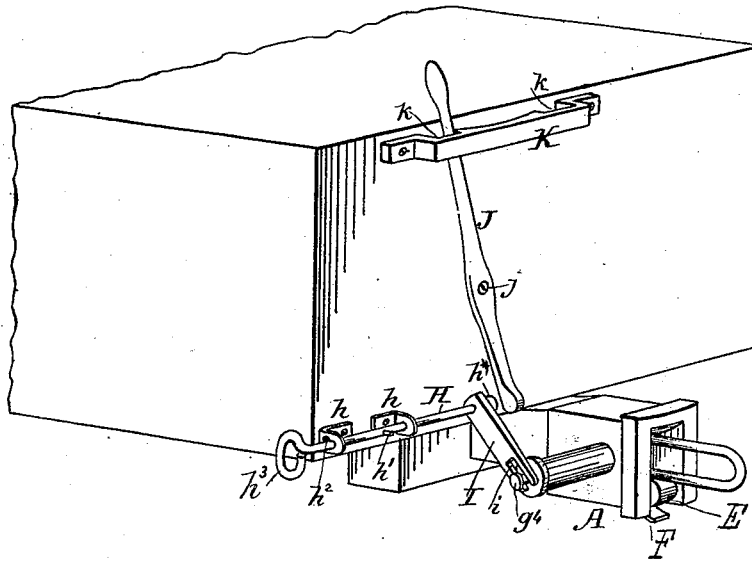


Fig. 2.

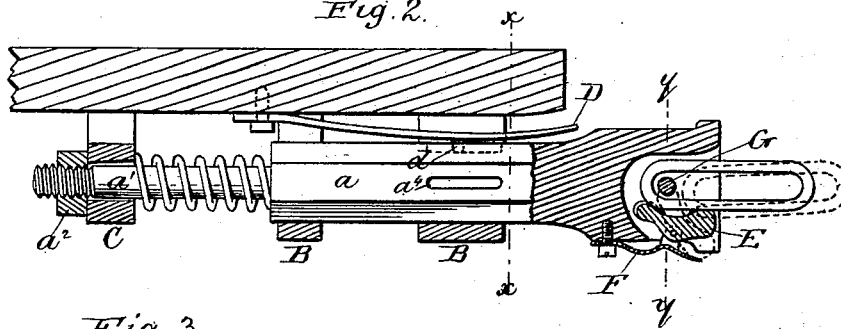


Fig. 3.

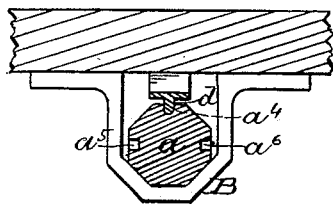


Fig. 4.

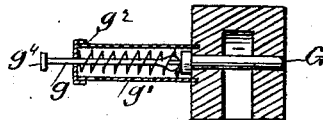
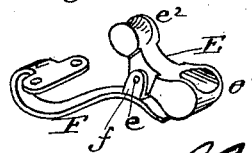


Fig. 5.



Witnesses:

E. B. Stocking  
Jas. Hunt

Leo Mosher

Inventor

E. L.

Att'y-

# UNITED STATES PATENT OFFICE.

THEODORE MOSHER, OF ALBANY, NEW YORK.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 265,533, dated October 3, 1882.

Application filed April 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE MOSHER, a citizen of the United States of America, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Car-Couplers; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of car-couplers which are adapted to automatically couple the cars to each other; and it consists in certain features hereinafter described, and specifically set forth in the claims.

Figure 1 is a perspective of my improved coupler applied to a car. Fig. 2 is a longitudinal vertical section thereof. Fig. 3 is a transverse section on the line  $x x$ , Fig. 2. Fig. 4 is a like section on the line  $y y$ , Fig. 2; and Fig. 5 is a detail in perspective.

Like letters refer to like parts in all the figures.

A represents the draw-bar, which is octagonal in cross-section at its body portion  $a$ , as clearly shown in Fig. 3, and is supported in straps B B, which conform to the shape of the body at their lower portions, and are separated at their upper portions more than the greatest diameter of the draw-bar body, and are suitably attached to the frame-work of the car or platform in the usual manner. The rear end,  $a'$ , of the draw-bar is cylindrical and screw-threaded, and passes through a cross-beam, C, and is provided with a nut,  $a^2$ , and between the body  $a$  and beam C a coiled spring,  $a^3$ , is located about the draw-bar, to serve the usual purposes of a buffer. Above the octagonal body  $a$  of the draw-bar, and attached to the frame-work of the car, or it may be to any suitable fixed portion of the structure, is a spring, D, having a projection or pin,  $d$ , near its free end, which is adapted to enter a groove,  $a^4$ , in the body of the draw-bar. Similar grooves,  $a^5 a^6$ , are formed in the sides of the body, and all the grooves are longitudinally disposed and extend in length a trifle more than the distance through which the draw-bar is moved in the

act of coupling or when drawing its load. The head  $a^7$  of the draw-bar is of the usual exterior shape, with the exception that the lower side of the link-pocket is removed and a spring-seated pivotally-supported link guiding and supporting dog, E, is substituted for the portion removed. The dog E is secured to the spring F by a pivot,  $e$ , and is weighted or heavier at its outer end,  $e'$ , than at its inner end,  $e^2$ , and grooved at its upper surface, as shown. The spring F is secured to the under side of the draw-bar by a screw or screws,  $f$ , and is provided with lugs  $f'$ , through which the pivot  $e$  passes.

The coupling-pin G passes through the head laterally, as shown, and to it is pivotally attached a rod,  $g$ , encircled by a coiled spring,  $g'$ , adapted to bear against the head of the coupling-pin and the cap  $g^2$  of a tubular case,  $g^3$ , which is secured in a suitable manner to the draw-bar head. The rod  $g$  is provided with a head,  $g^4$ .

A rod, H, is supported in brackets  $h$ , suitably secured to the car, and is adapted to move endwise in said brackets and to be retained in position when drawn out by its handle  $h^3$  by turning a lug,  $h'$ , which passes through the key-hole slot  $h^2$  of the outer bracket, against the outside of said bracket. The rod H is provided with a bar, I, loosely pivoted thereto, and retained thereon by the enlarged end or head  $h^3$  of the rod. The free end of the bar I is slotted at  $i$ , and rides upon the rod  $g$ , and is retained thereon by the head  $g^4$ .

A lever, J, is attached to the end of the car or platform by a pivot,  $j$ , and is held in position at either end of the movement of its upper end by a strap, K, provided with catches or notches  $k k$ . The lower end of the lever J is adapted to operate the rod H outwardly only, and, if desired, to retain it in said outwardly-operated condition without the use of the lug  $h'$ , as above described.

If desired, the dog E may be rigidly attached to the free end of the spring F, and in this case the dog should be of sufficient thickness vertically to partly or wholly cover the pin-hole in the draw-bar head when the link and pin are withdrawn; and the spring F may be of any suitable shape or contour to perform the desired functions.

The operation of my invention is as follows:

The link being withdrawn, (this element being supposed to be provided in the draw-bar of the advancing car,) the dog assumes the position indicated by dotted lines, Fig. 2, its weighted outer end being depressed and its inner end closing or partly covering the pin-hole, so that the pin is held thereby in a withdrawn position, which it has been caused to assume by drawing out the rod H by its handle  $h^3$  or by the lever J. The advancing link strikes the lower end of the dog, rides in the groove therein, then presses against the upper end of the dog and forces it beyond the pin-hole. The spring  $g'$  now forces the pin inwardly against the side of the link end, and when this is passed it is forced through the link and into the pin-hole at the opposite side of the draw-head. The concussion of the cars forces the draw-bar backward, and the rod  $g$ , connected to the coupling-pin, rides in the slot  $i$  of the bar I, and this bar swings downward and back, its pivotal attachment to the rod H permitting this movement, and the pin  $d$  of the spring D rides in the groove  $a^4$  of the body of the draw-bar, as will readily be seen by the construction described. It is now supposed that the advancing car is provided with a coupler of a different pattern from that shown—one in which the pin is entered vertically and the link lies flat or in a horizontal plane. The free end of spring D is raised to free its pin from the groove  $a^4$ , and the draw-bar is lifted and turned until either of the slots  $a^5$  or  $a^6$  is under the spring. The lever I in this case is disconnected from the rod  $g$ , and the draw-head is adapted to receive a link when presented in the supposed position.

It will be observed that the construction herein shown permits the withdrawal of the pin and setting the coupler for operation, and subsequently returning the rod or the lever by which it is set without upsetting the coupler; that the spring-seated dog when set enlarges the opening into the draw-bar, so that couplers of varying heights will direct the link into the bar, and when unset will adjustably retain the link against the upper side of the pocket, and thus obviate unnecessary rattling of the link, and in a measure prevent the cars jumping the track. This element, (the dog,) if rigidly attached to the spring, would serve these latter functions, but would not to such

a degree enlarge the mouth or guide the link as when pivotally attached, as described. The straps B B aid the spring D in preventing the draw-bar from turning from a desired position.

If desired, the body of the draw-bar may be many-sided or polygonal in cross-section, and other than octagonal, it being necessary only that the bottom of its supporting-straps shall conform thereto.

Having described my invention and its operation, what I claim as new, and desire to secure by Letters Patent, is—

1. A draw-bar provided with a spring-seated, pivoted, and weighted dog, substantially as shown and described.

2. The combination of the draw-bar A, having the polygonal body  $a$ , grooved at  $a^4$   $a^5$   $a^6$ , with the spring D, having the pin  $d$ , substantially as shown and described.

3. The combination of the draw-bar A, having the polygonal body  $a$ , grooved as shown, with the spring D, having pin  $d$ , and the straps B B, conformed thereto, substantially as shown and described.

4. The combination of the head  $a^7$ , and dog E, weighted at its outer end, with the spring F, adapted to pivotally support the dog, substantially as shown and described.

5. The combination of the head  $a^7$ , dog E, spring F, pin G, rod  $g$ , pivotally attached to the pin, spring  $g'$ , case  $g^3$ , and means, substantially as shown and described, for withdrawing the rod  $g$ , substantially as and for the purpose set forth.

6. The combination of the rod H and bar I, loosely pivoted thereon, and slotted at  $i$ , with the rod  $g$ , spring  $g'$ , and pin G.

7. The combination of the rod H, having lug  $h'$ , brackets  $h$   $h$ , one of which is provided with the key-hole slot  $h^2$ , and the bar I, pivotally attached to the rod, substantially as shown and described.

8. The combination of the rod H, pivotally attached bar I, and detached lever J, substantially as shown and described.

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

THEO. MOSHER.

Witnesses:

E. B. STOCKING,  
C. A. JOHNSON.