

[20.] *Olney L. Smith, and James F. Utton's,*
Improvement in Railroad Car Coupling, Etc.
 No. 118,824. Patented Sep. 12, 1871.

Fig 1.

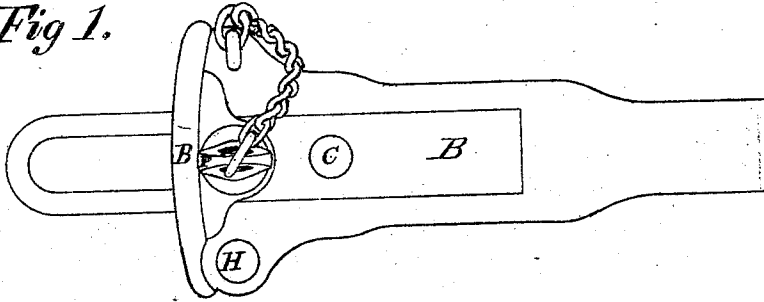


Fig 2.

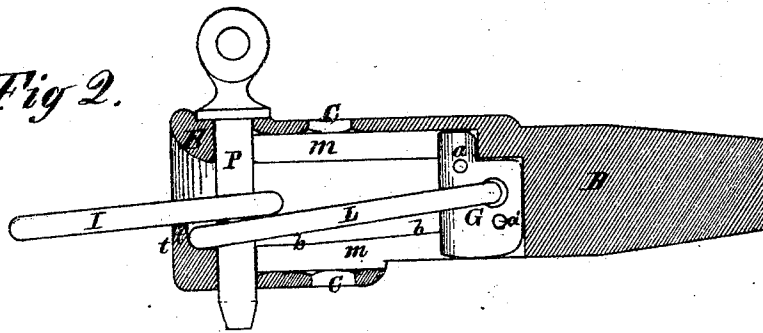


Fig 3.

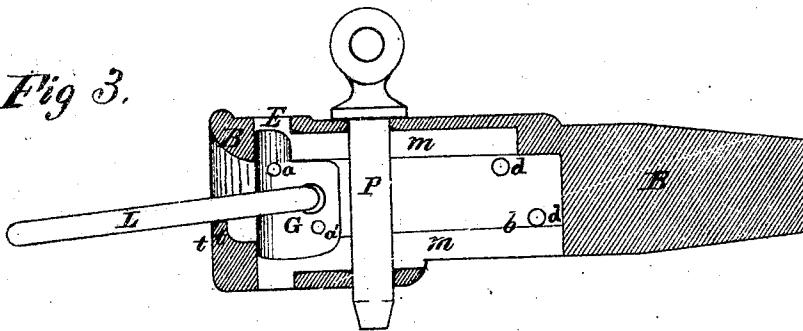
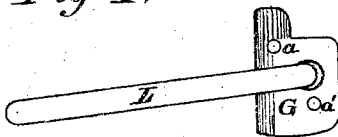


Fig 4.

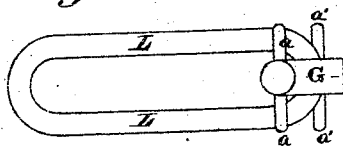


Inventors.

Olney L. Smith

James F. Utton

Fig 5.



Witnesses.

Isaac A. Brinnell

John F. Polden

UNITED STATES PATENT OFFICE.

OLNEY L. SMITH AND JAMES F. UTTON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 118,824, dated September 12, 1871.

To all whom it may concern:

Be it known that we, OLNEY L. SMITH and JAMES F. UTTON, both of the city and county of Providence and State of Rhode Island, have invented a certain Improvement in Railroad-Car Coupling, of which the following is a specification:

In the accompanying drawing, Figure 1 is a top view of our improved railroad-car coupling. Fig. 2 is a longitudinal vertical section of the same, showing the internal arrangement. Fig. 3 is a similar view of the same, with the position of the parts changed. Fig. 4 is a side view, and Fig. 5 is a top view of the united link and toggle detached from the bunter.

Similar letters indicate like parts in all the figures.

The draw-bar or bunter B is of cast-iron, without material change in its usual form externally from others in general use, except in the features which may be specially mentioned hereinafter. Internally the bunter is formed with a channel or groove, *m*, above and below, for the reception of the toggle G in an upright position, and to slide lengthwise therein from the position shown in Fig. 2 to that shown in Fig. 3, with the link L protruding from the bunter for the purpose of being coupled to another bunter, in which position it will be seen the toggle occupies the place of the coupling-pin P in Fig. 2, with its foremost part bearing against the foremost surface of the hole E, through which the said pin is usually inserted, and in such position serves to confine the link I in the bunter in the same manner that a coupling-pin would do with a separate link, and at the same time allowing the same freedom of movement in all directions. The toggle G is, by preference, made of wrought-iron, and has a hole with a rounded margin through its rear part, through which the link L, of round wrought-iron, is inserted and welded together solidly in the usual way, this link of itself being, in all respects, like the ordinary separate link in general use for the purpose, and is of suitable length when withdrawn into the bunter for the forward end to drop and rest behind the under lip *t* of the mouth of the bunter, as shown in Fig. 2, so that another link, I, of like construction, may freely enter the mouth of the bunter and be confined by the coupling-pin P, whereby, besides carrying a coupling of its own in reserve, provision is made for the

use and reception of any other coupling-link of similar construction. The toggle is provided with two lugs, *a a'*, which may consist of stout steel pins driven through from one side and extending equally each way from the toggle. The weight of the toggle and rear portion of the link is borne by the lower pin, *a'*, which rests and slides on the surface *b* on each side of the lower channel *m*. The upper pin *a* prevents the toggle from turning over on the link out of true position when it is pushed backward into the bunter. These lugs or pins may be inserted through two holes, *d d'*, in the sides of the bunter after the toggle has been introduced through the mouth by turning it over at right angles to its true upright position on the link L, and afterward restoring it to its upright position against the rear end of the bunter, as shown in Fig. 2, thus bringing the pin-holes in the toggle directly opposite the holes *d* in the bunter, through which the pins may be driven and the position of the toggle be secured. To prevent the link and toggle from being pushed back into the bunter in coupling, a second pin-hole, C, is provided in the rear of and parallel with the usual pin-hole E, in which, C, the coupling-pin P is inserted after the link and toggle have been drawn into their most forward position, as shown in Fig. 3, and thus the backward movement of the toggle is prevented and the link held in position to enter the opposite bunter, and after the coupling is effected and the fullest freedom of the link and toggle is desirable, the pin P should be withdrawn from the second pin-hole C, and, as the forward pin-hole is occupied by the toggle, a third pin-hole, H, is provided on one side the bunter, as shown in Fig. 1, wherein the pin may be inserted in reserve and ready for immediate use.

It will be seen that the channel-way affords room for the solid sliding block to move vertically therein to elevate and depress the block and rear end of the link, as circumstances require; also, that the weight of the block depresses the rear end of the link and keeps it in line with the bottom of the bunter in proper position to enter another bunter of the same elevation. At the same time it admits, by the elevation or depression of the block and rear end of the link, of the introduction of the forward end of the link to another bunter, either higher or lower than its own, with the requisite freedom for coupling and drawing

a load without binding in a bunter at a different elevation; and it is this vertical movement of the block itself in the channel-way, together with its weight and mode of confining the link by a simple hole therein, that adapts it to couple freely and effectually with other bunters of different elevations, and which distinguishes it from another arrangement of a sliding block and link in which the bunter has a vertical movement in the block on a pin in the usual way, and is provided with recesses to receive and hold the rear end of the link at different elevations in the block.

It should therefore be understood that we do

not claim, broadly, the combination of a sliding block and a link, as this is not new.

What we claim is—

The bunter B and pin P, in combination with toggle G and link, when constructed and operating substantially as described and for the purpose set forth.

OLNEY L. SMITH.
JAMES F. UTTON.

Witnesses:

ISAAC A. BROWNELL,
JOHN F. POLDEN.