Jacob H. Bull's,

Improvement in Car Couplings.

PATENTED JUL 11 1871

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Fig. 1.

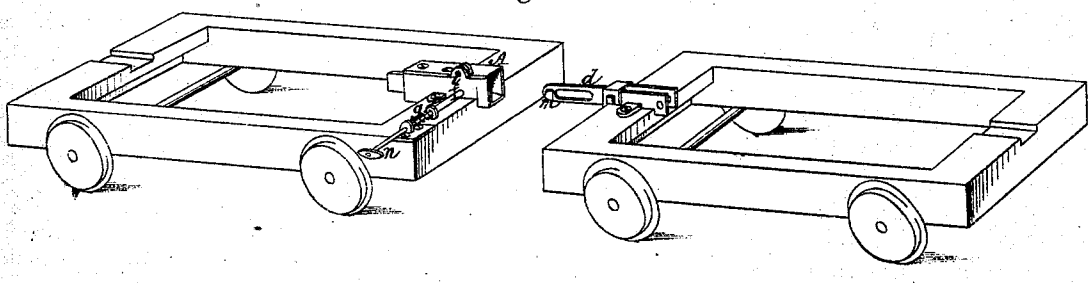


Fig. 2.

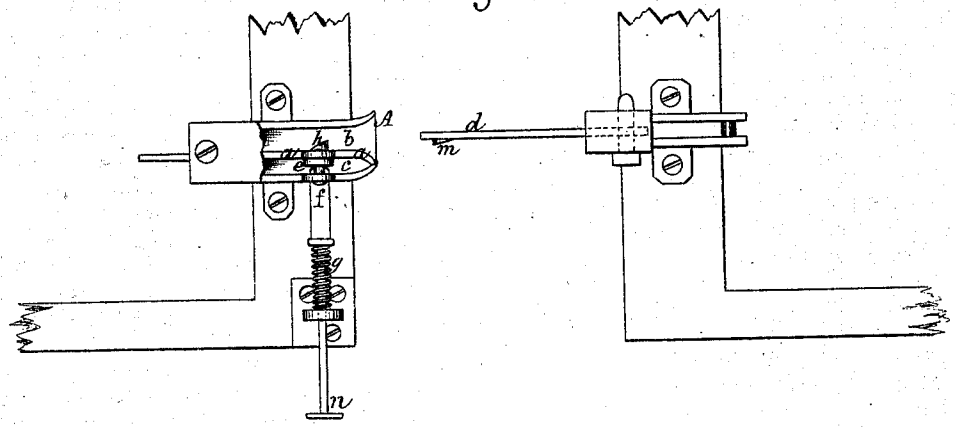


Fig. 3.

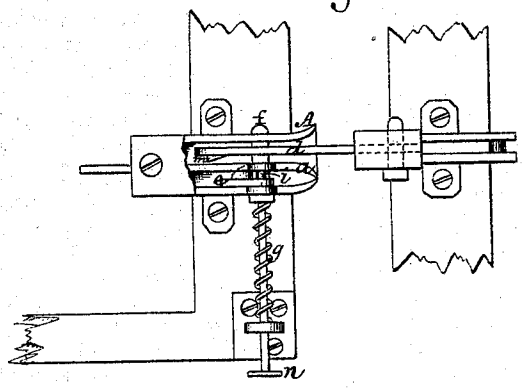
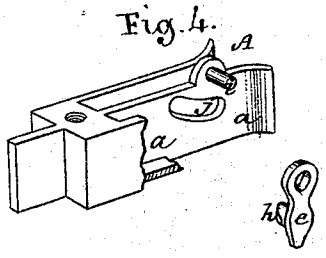


Fig. 4.



Witnesses.

W. F. Henderson

Edmund Masson

Jacob H. Bull.

By atty A. B. Stoughton.

UNITED STATES PATENT OFFICE.

JACOB H. BULL, OF HEREFORD, MARYLAND.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. 116,801, dated July 11, 1871.

To all whom it may concern:

Be it known that I, JACOB H. BULL, of Hereford, in the county of Baltimore and State of Maryland, 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 same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents, in perspective, the coupling as attached to the cars. Fig. 2 represents, on an enlarged scale, a plan of the coupling, partially exposed to show the interior, and as the parts appear when ready to be coupled. Fig. 3 represents a similar plan as the parts appear when brought together and coupled. Fig. 4 represents, in perspective, some of the details of the coupling not clearly seen in the other figures.

Similar letters of reference where they occur in the separate figures denote like parts in the drawing.

I am aware that many kinds of self-couplings, so called, for cars have been devised, and among them those wherein the bolt is held up in vertical position, and is tripped and allowed to fall by the insertion of the link in the buffer-head. I disclaim all such couplings.

My invention consists in a coupling in which the bolt is horizontal, and which is entered and withdrawn from the link at the side of the buffer-head, and which is self-coupling also, and easily operated without going in between the ends of the cars or on the platform.

A represents a buffer-head, which has a longitudinal and vertical wall or partition, *a*, in it, so as to form two compartments, *b c*, therein, the one, *b*, being for the link or coupling-bar *d*, and the other, *c*, is for the trigger *e*, which holds out the coupling-bolt *f* when that operation is necessary, and is tripped by the entrance of the link or coupling-bar *d* when the cars are run together, and allows the spring *g* to shoot the bolt *f* through said coupling and into or through the buffer-head A, and thus couple the cars. In the wall or partition *a* there is a pivot, *i*, on which the trigger *e* is hung, and a beveled projection, *h*, on said trigger passes through a slot, *j*, cut through said wall, so that the projection *h* extends slightly into the compartment *b*. The normal position of the trigger is down, where it hangs by its gravity, requiring no spring to move it down. On the side of the coupling-bar or link *d* there is a small projection, *m*, which, when the link or coupling-bar enters the buffer-head, takes against the projection *h* of the trigger, and swings said trigger on its pivot far enough to clear the bolt. The bolt being no longer held out by said trigger, the reaction or expansion of the spring shoots it into and through the link and buffer-head and couples the cars. When the cars are to be uncoupled it is only necessary to draw out laterally the bolt *f* by means of the handle or hand-piece *n*. The moment the bolt is drawn beyond the range of the trigger *e* it (the trigger) drops. When the bolt is released or let go it is stopped and held out by coming against the trigger. When, in moving the cars apart with the bolt held out, as above stated, the projection *m* on the link *d* comes against the projection *h* on the trigger *e* it simply slides the trigger on its pin *i*, moving it and its projection out of the way. When the projection *m* has passed that *h*, then the spring *g*, through the bolt *f*, moves the trigger back again on its pin, and the projection *h* again protrudes into the compartment *b*, so as to be caught and actuated by the link when the cars are run together to be coupled.

Arranging the coupling-bolt in the way above described, at the side instead of on top of the buffer-head, avoids all danger in coupling and uncoupling, as the operator is not required to get in between or even on the platforms of the cars.

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

In combination with a buffer-head having a spring coupling-bolt moving horizontally through it, the partition *a*, trigger *e*, and projections *h* and *m*, for the purpose of holding out and tripping and allowing said bolt to shoot into coupling position, substantially as described and represented.

Witnesses: JACOB H. BULL.

A. B. STOUGHTON,

EDMUND MASSON.