H. M. GROVER.

Car-Coupling.

No. 199,433. Patented Jan. 22, 1878.

Fig. 1.

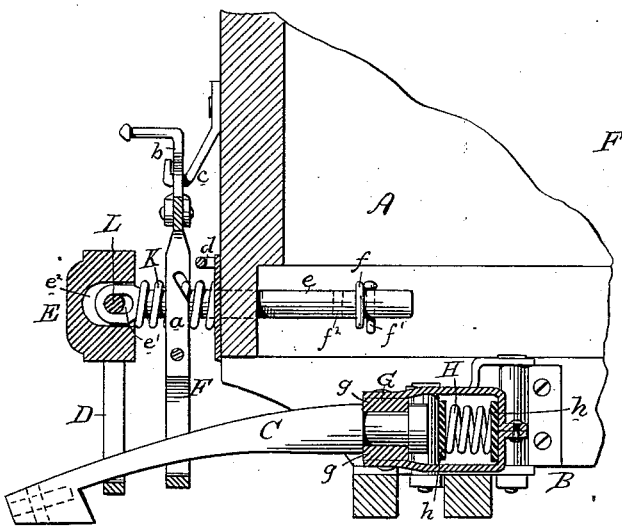


Fig. 2.

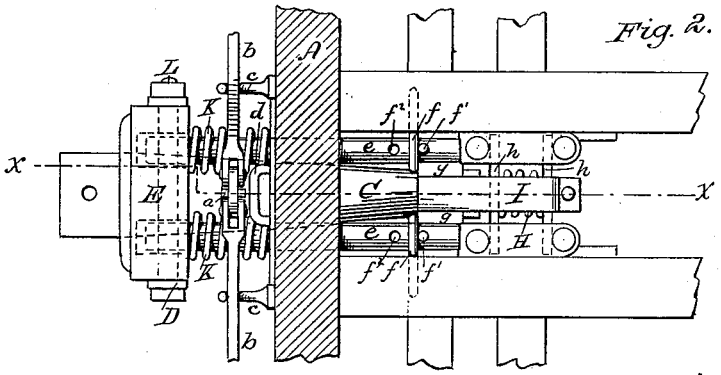
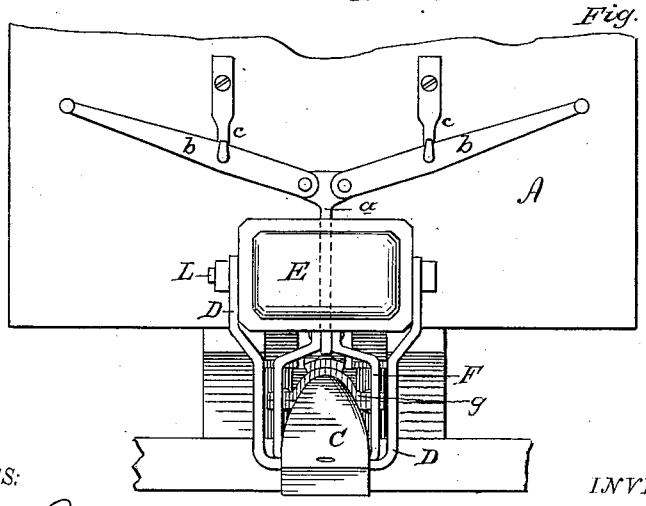


Fig. 3.



WITNESSES:

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HENRY M. GROVER, OF VINTON, IOWA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **199,433**, dated January 22, 1878; application filed December 1, 1877.

To all whom it may concern:

Be it known that I, HENRY M. GROVER, of Vinton, county of Benton, and State of Iowa, have invented certain new and useful Improvements in Car-Couplings and Buffer Attachments for Cars, of which the following is a clear, full, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section. Fig. 2 is a plan view, with coach-body removed. Fig. 3 is an end view.

This invention relates to improvements in devices for securing and adjusting the coupling-bar and buffer attachments; and the invention consists in the construction and arrangement of parts, as will be hereinafter fully described.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, A represents a car, and B the truck for supporting the same. C represents the coupling-bar, supported in the link D, pivoted to the buffer E. F represents a loop for raising and lowering the coupling-bar, and is operated by the notched link *a* and either one of the foot-levers *b b*, which are fulcrumed in hooks *c c* pivoted to the end of the car, said coupling-bar being held in a raised position by the notched link engaging with the staple *d*, secured in the end of the car, all as clearly shown in Fig. 1.

The coupling-bar C has its rear end journaled or swiveled in the iron frame G, which is composed of two half semicircular bars, *g*, securely bolted together; and said frame is secured to the usual draw-spring H by means of the right-angled plates I I, which encircle the inclosing-plates *h h* of the draw-spring, said plates I having their rear ends secured together, and the front ends secured to the top and bottom of the frame G, all as clearly shown in Fig. 1.

The coupling-bars are swiveled, so that when cars having the bars arranged the same way approach one may be turned, and thus a coupling effected, and also so as to allow this style of hook-coupling to be united to any of the well-known jaw-couplings now in use.

By means of the various features above described the coupling-bar is adapted to be adjusted vertically, and it is at the same time allowed to adjust itself to the varying positions of the car while in motion.

The buffer is secured to the car by means of the rods *e e*, which pass through the fronts of the car-frame, and are adjustably secured in the staples *f f* by the pins f^1 f^1 and the series of holes f^2 f^2 in the rods. K K are springs, surrounding the rods *e e* between the car and the buffer. Each of the rods *e e* is provided in its front end with an oblong slot, e^1, said slotted portion passing into the enlarged holes e^2 e^2 in the buffer, and the rods secured therein by the rod L passing transversely through said buffer and rods, and to the ends of which the bail D is pivoted. This manner of securing the spring-rods to the buffer admits of said buffer being struck at different points and allowed to give with the springs without breaking the rods; and, by their construction, if one should break, it could be easily and quickly replaced by a new one.

I claim as new and desire to secure by Letters Patent—

1. The combination, with the coupling-bar, of the loop F, notched link *a*, foot lever or levers *b b*, pivoted hook or hooks *c c*, and staple *d*, substantially as and for the purpose herein shown and described.

2. The combination, with the coupling-bar and draw-spring, of the frame G, to which the bar is swiveled, and the right-angled plates I I, the several parts relatively arranged and connected together, substantially as herein shown and described.

3. The combination, with the buffer, provided with the enlarged holes e^2 e^2, of the adjustable spring-rods *e e*, provided with the oblong slots e^1 e^1, and secured to the buffer by the transverse rod L, the several parts constructed and relatively arranged to operate substantially as herein shown and described.

HENRY MARTIN GROVER.

Witnesses:
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