(No Model.)

J. FENIMORE.

CAR COUPLING.

No. 267,173. Patented Nov. 7, 1882.

Fig. 1.

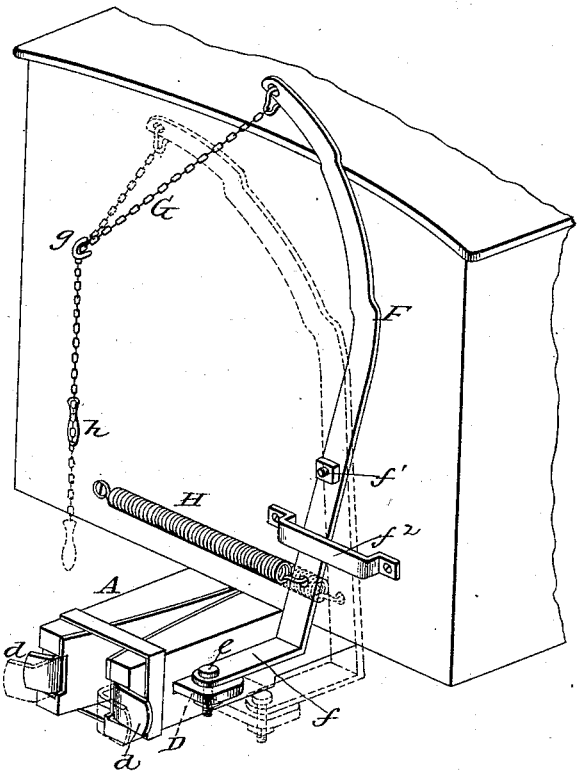


Fig. 5.

Fig. 3.

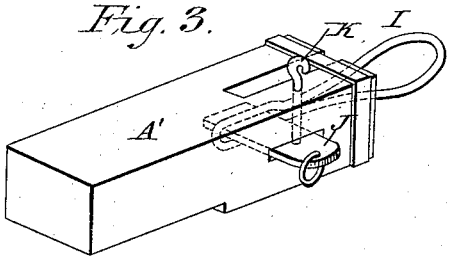


Fig. 2.

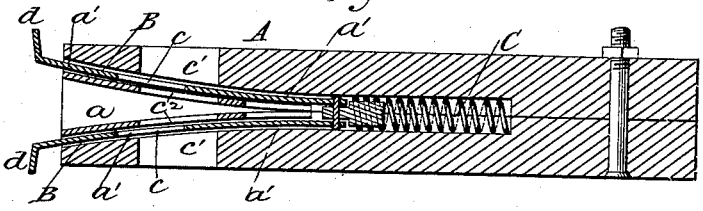
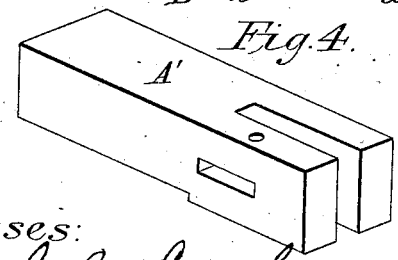


Fig. 4.



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JOHN FENIMORE, OF ORLEANS, INDIANA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 267,173, dated November 7, 1882.

Application filed July 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN FENIMORE, of Orleans, in the county of Orange and State of Indiana, have invented certain new and useful Improvements in Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description of the invention, sufficient to enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to certain improvements in car-couplings, having for its object to effect the coupling operation with facility and without danger to the attendant, it being performed automatically and without requiring his passing between the meeting cars for that purpose; and the nature of my invention consists in the employment, in connection with a draw-bar, of spring-plates adapted to slide therein with their outer ends projecting beyond the forward end of the draw-bar, and having apertures through them to register with a transverse horizontal passage through the draw-bar, and a spring coupling plate or bar adapted to pass through the passage in the draw-bar and the apertures in the aforesaid spring-plates, and having an operating-lever.

It consists, further, in certain details in the construction and arrangement of the parts, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a perspective view of my car-coupling applied to the end of a car partly broken away. Fig. 2 is a horizontal section through the draw-bar, showing the spring-plates. Figs. 3, 4, and 5 are other detail views of my coupling.

In carrying out my invention I employ a draw-bar, A, formed preferably in the direction of its length with a chamber or opening, *a*, flaring outwardly or forwardly, and with passages *a' a'* arranged outside of and following the direction of the flaring sides of the passage *a*.

B B are metal plates, inserted into and adapted to conform to the outward or forward flaring arrangement of the passages *a'* of the draw-bar A. The inner convergent ends of the plates B are connected together, and have their uniting bolt or rivet passing through the neck of a block, *b*, said neck or block being inserted between said ends of plates B.

In rear of the plates B is arranged a spring, C, partly coiled around the block *b*, and located in a rearward extension of the chamber *a* in the draw-bar A, the normal action of which is to project the forward ends of the plates B beyond the draw-bar, as shown in dotted lines in Fig. 1 and in full lines in Fig. 2. Through the sides of the plates B are made apertures *c*, which are adapted to register with coincident apertures, *c' c²*, made respectively through the sides of the inner walls of the passages *a' a'* and through the sides of the draw-bar A, and which receive the horizontally-sliding plate D. The outer ends of the plates B are bent laterally or provided with right-angled projections *d*, to provide broad surfaces of contact for the approaching draw-bar during the coupling operation. The horizontally-sliding plate D has connected to its projecting end by means of a headed and nutted pin or bolt, *e*, the right-angled forwardly-projecting extensions *f* of a lever, F, pivoted at *f'* to the end of the car, said lever being limited in its movement by a guide or staple, *f²*, fastened also to the end of the car. This lever extends upward sufficiently above the top of the car when applied to a house or stock car to permit it to be conveniently operated at that point, and has in such case a chain or rope, G, connected to its upper end and passed through a staple, *g*, secured to the end of the car, its lower end depending sufficiently near the ground to permit its being readily grasped and pulled by the operator standing thereon when it is desired to uncouple the cars at that point. The chain G, for convenience of operation, may be provided with a handle, *h*.

H is a helical spring, with one end fastened to the end of the car and the other end to the lower shorter arm of the lever F, the purpose of which is to thrust the plate into the link during the coupling operation and to hold it therein when the cars are coupled.

I is the coupling-link, preferably formed into a small and a large loop, the small loop having a plate, J, passed through it in the draw-bar A' to effect the holding the link therein, while

the plate itself is held in the draw-bar by a pin, K, passed through an aperture in the draw-bar and an aperture in the plate.

It will be observed that when the cars are uncoupled the plates B will be projected at their forward ends by the spring C beyond that end of the draw-bar A, and the plate D, answering to the ordinary coupling-pin, will be withdrawn from the apertures c c^2 of the plates B and the inner walls of the passages a', which has been previously effected by pulling downward upon the chain G or pushing downward upon lever F, the apertures c of the forwardly-projected plates B being moved out of line in part with the apertures c^2 in the inner walls of the passages a' and the aperture c' in the draw-bar, thus enabling the plates B to prevent the coupling plate or bar re-entering the link-chamber a, said coupling-plate being held by the action of the spring H to permit it to spring into the coupling-link at the instant of the retraction of the plates B. Upon the meeting of the cars the link I of the draw-bar A′ will pass into the draw-bar A, and the plates B of the latter draw-bar will be forced inward by the meeting draw-bar A′ striking their lateral projections d, causing the apertures c of said plates to fully register or come into line with the passage or aperture c' of the draw-bar A. At this juncture the coupling plate or bar will instantly spring or pass through said apertures and into the coupling-link I, effecting the coupling of the cars.

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

1. In a car-coupling, the combination, with the chambered draw-bar A, of the spring sliding plates B, having their outer ends projecting beyond the forward end of the draw-bar, and apertures c through them, adapted to register with a transverse horizontal passage, c', in the draw-bar, and the spring coupling plate or bar D, adapted to pass through the aforesaid apertures c of the plates B and the passage c' of the draw-bar, with an operating-lever, substantially as and for the purpose set forth.

2. In a car-coupling, the combination, with the chambered draw-bar A, of the spring sliding plates B, having their outer projecting ends provided with lateral projections or flanges d, and apertures c through them, adapted to register with a transverse horizontal passage, c', in the draw-bar, the coupling plate or bar D, adapted to pass through the aforesaid apertures c and passage c', the spring H, and the lever F, substantially as and for the purpose set forth.

3. In a car-coupling, the combination, with the chambered draw-bar A, having passages a', of the sliding laterally-apertured plates B, with their inner convergent ends secured to a block, b, having connected thereto a spring, C, said spring-plates diverging toward and at the forward end of the draw-bar, beyond which they project, substantially as shown and described, and for the purpose set forth.

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