M. HEINES.

CAR-COUPLING.

No. 190,138. Patented May 1, 1877.

Fig. 1.

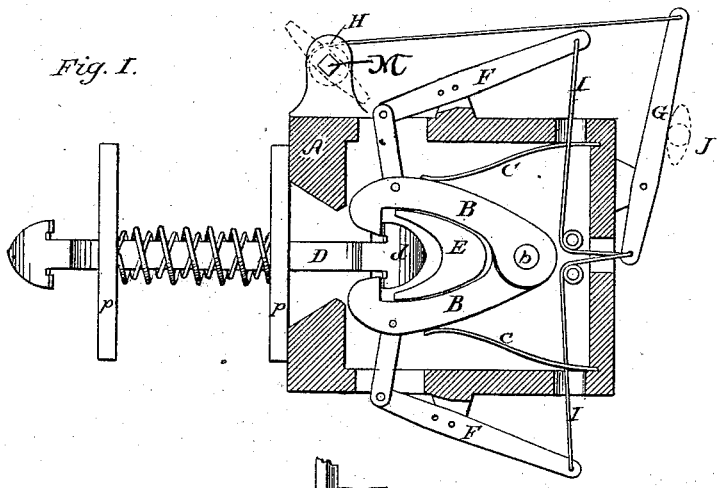
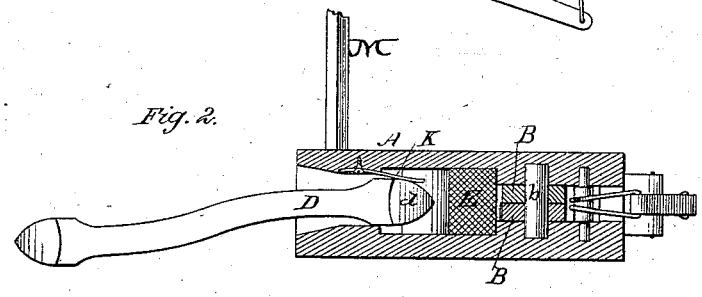


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

MICHAEL HEINES, OF FORT SILL, INDIAN TERRITORY.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **190,138**, dated May 1, 1877; application filed April 10, 1877.

To all whom it may concern:

Be it known that I, MICHAEL HEINES, of Fort Sill, in the Indian Territory, have invented a new and useful Improvement in Car-Couplers, of which the following is a full and exact description:

This invention relates to that class of car-couplers which are known as "automatic," because they are provided with automatic means for seizing and locking the coupling bar or link, and thus render unnecessary the presence of an attendant, who, with the couplers commonly in use, usually stands between the cars at considerable personal risk.

The objects of my invention are to hold securely the coupling-rod in whatever position the coupled cars may be relatively, as well as to make the coupling equally certain in one position as another, and to facilitate the process of uncoupling, so as to be easily effected from the top or side of the car, as may be found best.

My invention consists in a draw-head or coupler provided with two latches, working in opposite directions in the same plane, driven toward each other by exterior springs, to seize and hold the head of the drawn bolt, and withdrawn from each other by pivoted levers or cams to release the same, and in the arrangement of operative levers whereby the latches may be withdrawn by a person on top, or on the platform, or at the side, as may be found most desirable. It also consists in a double buffer-spring placed on the draw-bolt, to prevent the slackness usual between the cars, and the unpleasant jerking when starting and stopping.

That others may fully understand my invention, I will more particularly describe it, having reference to the accompanying drawing, wherein—

Figure 1 is a plan of my coupler. Fig. 2 is a longitudinal section of the same.

A is the case of the draw-head or coupler. It is bolted fast to the frame of the car. Within the case A are the two hook-headed pivoted latches B B, which I prefer to pivot to the same pin *b*, although they may, if desired, be separately pivoted. Springs C C, back of the latches B B, tend to force them forward and into engagement with the head of the draw-bar D, when it is inserted between said latches.

The draw-bar D is provided with a square-shouldered head, *d*, pointed in front, so that it will readily enter the coupler-jaw, and force its way to engagement with the latches B B.

An elastic buffer, E, preferably a mass of india-rubber, is placed between the jaws B B, to receive and cushion the head *d* of the draw-bar D. This buffer forces the head *d* forward against the jaws of the latches, so as to keep it always in engagement therewith, whereby the jerking produced by lost motion in stopping and starting with the ordinary draw-head will be obviated, and the fracture of the link or draw-head much less likely to occur.

The buffer E also prevents the sudden jamming together of the ends of the cars when changing speed, because the draw-bar D will be an inflexible coupling, and having its two ends firmly seated against the buffers of the cars, respectively, it follows that it will serve to keep them asunder, and thereby prevent the unpleasant jerk usually experienced in starting and stopping, when link-couplings are used.

The latches may be forced apart by a variety of mechanical devices, some of which I show in the drawings, and these may be arranged to be operated from the top of the car, or from the platform, or from the side of the car, as may be found most desirable.

In Fig. 1 is illustrated a system of levers, F F, coupled, respectively, to the jaws B B, and having an adjustable fulcrum-pin, so that the proportionate lengths of the long and short arms of said levers may be varied as required. The levers F F are, in turn, coupled to a lever, G, which may be extended to the side of the car, so as to be operated by a person standing by the track; or it may be connected with a pulley, H, or other suitable device capable of operation from above by means of a shaft, M. In the drawings the connections between the levers F and the lever G are formed with flexible cords of wire or other proper material, or of chains I.

The lever G may be operated by a cam simi-

lar to that shown in Fig. 5 at J, if the same is placed in a suitable position by it, as shown in dotted lines.

A spring, K, may be placed under the cover of the draw-head case A, to bear upon the head *d* and keep the same down, as shown.

The draw-bar D may be provided with two sliding plates, *p p*, placed thereon, and separated by strong springs wound in opposite directions, the one over the other, so as to afford mutual support to each other, and thereby to increase their power of resistance. The object of these plates is to supplement the buffers E, and prevent the cars from ramming together when speed is slackened. Said plates rest against the draw-heads, respectively, as shown in Fig. 1.

I am aware that draw-links have been provided with sliding blocks at each end and interposed single springs, and therefore do not claim, broadly, a draw-bar or link with a spring attached.

Having described my invention, what I claim as new is—

1. The hook-headed latches B B, combined with the operative shaft M and the connecting mechanism, consisting of levers F F and G, with the connecting cords or chains, as described.

2. The hook-headed latches B B, actuated by springs C C, combined with the draw-bar D, provided with the buffer-plates *p p* and springs, wound one over the other in opposite directions, substantially as set forth.

MICHAEL HEINES.

Witnesses:
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