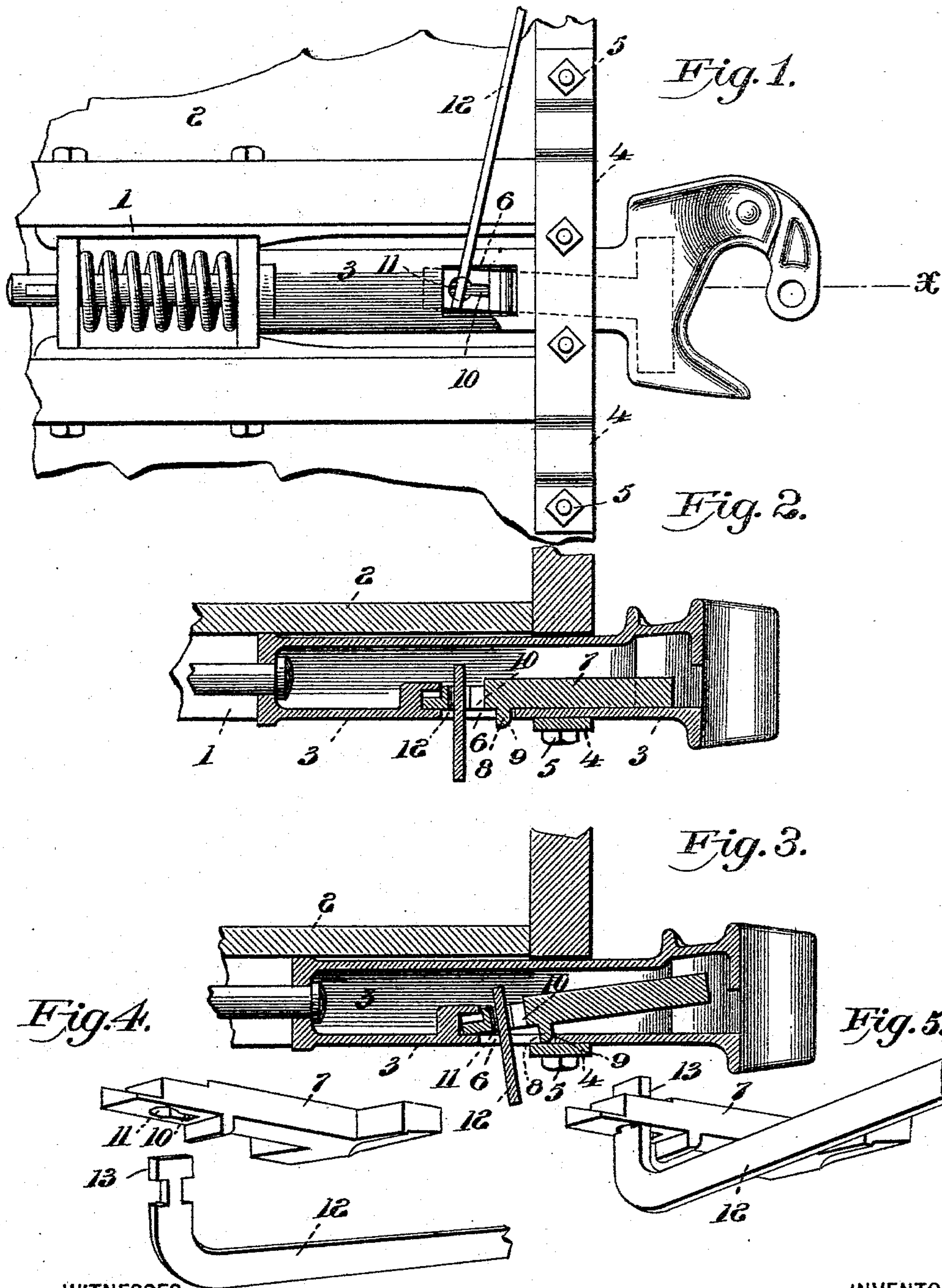


(No Model.)

F. ENOS.
CAR COUPLING.

No. 515,577.

Patented Feb. 27, 1894.



WITNESSES:

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 515,577, dated February 27, 1894.

Application filed April 1, 1893. Serial No. 468,694. (No model.)

To all whom it may concern:

Be it known that I, FRED ENOS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Car-Couplers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in that class of car couplers known as the "master-car-builders' type," but particularly has reference to that construction of such coupler shown and described in Letters Patent No. 486,578, issued to me November 22, 1893.

The objects of my present invention are, to provide a simple and efficient means for raising the lock-bar for uncoupling, and also to provide means whereby, in case the fastenings of the draw-bar should become broken, the automatic opening of the knuckle to uncouple the cars would be insured, thereby preventing the draw-bar from pulling out and dropping on the track.

With these ends in view my invention consists in the details of construction and combination of parts, as will be hereinafter fully explained and particularly pointed out in the claims.

In the accompanying drawings—Figure 1, is a bottom view illustrating my improvement, the operating lever being in proper position relative to the lock-bar. Figs. 2 and 3, are longitudinal sectional elevations at the line *x* of Fig. 1, and showing respectively the normal position of the several parts, and the position of such parts when the lock-bar is automatically elevated by the initial advance of the draw-bar on the breaking of the fastenings of the latter. Fig. 4, is a detail perspective showing the proper relative position of the lock-bar and operating lever preparatory to their connection together, and Fig. 5, is also a detail perspective showing such lock-bar and lever secured together in proper relative position.

Similar numbers of reference denote like parts in the several figures of the drawings.

Heretofore, in couplers of this style, it has frequently happened that the fastenings,

which secure the draw-bar as against longitudinal displacement, have become broken, with the result that the draw-bar has been pulled completely out of its housing in the end of the car and allowed to drop on the tracks and thereby cause derailment of the cars. My invention contemplates the prevention of any accidents of this nature by the provision of positive means for uncoupling the cars in the event of any tendency of the draw-bar to pull out.

In the present instance I will not enter into any description of the draw-head, the pivoted knuckle, the lock-bar, and the manner of securing the draw-bar within the housing at the end of the car, since my invention has nothing to do with these but may, in fact, be applied in connection with any suitable lock-bar the elevation or operation whereof releases the knuckle for uncoupling.

1 is the housing secured to the floor 2 of the car in the usual manner, and 3 the draw-bar of ordinary construction secured as against longitudinal movement within this housing in any well known manner.

4 is the usual support for the draw-bar extending below and athwart the same and secured by bolts 5 to what is termed the "dead-wood" in the end of the car.

Within the bottom of the draw-bar is an opening 6.

7 is the lock-bar which rests upon the floor of the draw-bar when in position to lock the knuckle, said lock-bar having depending therefrom through the opening 6 and below the draw-bar a lug 8 whose front face is rounded or beveled as seen at 9. In the rear end of this lock-bar is a gate which extends through said bar from top to bottom, said gate being narrow as seen at 10 at one end, and enlarged into a circular shape at the other end as seen at 11, the complete shape of such gate being that of an ordinary key-hole. This gate registers through the opening 6 so as to be readily accessible from without the draw-bar.

12 is the operating lever, in the present instance L shaped, and terminating at its inner end in a T head 13 whose length is that of the gate and whose width is that of the narrow part 10 of such gate. The shank of this T-head is about equal in length to the

thickness of the lock-bar, so that it will be readily understood that the T head may be inserted within the gate until clear of the lock-bar, and after the neck of the head has been shifted into the circular part 11 of such gate, the operating lever may be turned around, thereby locking said bar firmly to the bar 7 as clearly shown in Fig. 5. The operating lever will thus be firmly connected with the lock-bar, since after the end of such lever has been turned within the gate to the position shown at Fig. 5, the neck of the T head, being of greater width than the gate 10, will prevent any movement of the inner end of the lever lengthwise of the gate. This operating lever extends outward within convenient reach of the train-man, who, in uncoupling, simply raises the lever slightly, thereby elevating the lock-bar. While this lever is secured rigidly with the lock-bar, it will be clear that such lever may be readily detached therefrom by swinging it around and withdrawing the T head from the gate, and this is a great advantage both in assembling the parts of the coupler and in removing the same for the purposes of repair.

As hereinbefore stated, the draw-bar rests upon the support 4 while the lug 8 depends from the lock-bar through the opening 6 in the bottom of the draw-bar. Should the draw-bar break away from its fastening in the end of the car, or should any breakage of parts happen whereby the draw-bar would be free to pull out, the lug 8 will, as the draw-bar is pulled forward, strike against the support 4, and, riding up upon such support will effect the elevation of the lock-bar, as seen at Fig. 3, thereby automatically insuring the uncoupling of the draw-bar.

My improvement, both in respect to the securing of the operating lever and the provision of the beveled lug, will apply to almost any locking device for a car-coupler, it only being necessary that such device should be elevated or otherwise operated to release the knuckle of the coupler and that the lug should, when the draw-bar starts to pull out, strike against some stationary part to cause this operation of the lock-bar.

I claim—

1. In a car-coupler, the combination of the draw-bar having an opening in the bottom thereof, the lock-bar supported and confined within said draw-bar and having in its rear end and extending through the same from top to bottom a gate narrow at one end and large at the other, and the operating lever having a T-head on its inner end adapted to enter said gate, the neck of said head being of such width and length that after the T-head has been inserted through the gate the lever may be turned around thereby locking it as against retraction or side thrust, substantially as set forth.

2. In a car-coupler, the combination of the draw-bar having an opening in the bottom thereof, the lock-bar supported and confined within the draw-bar and having in its rear end a key-hole shaped gate, and the operating lever having its inner end adapted to such gate whereby when the lever is inserted within the latter and turned around it will be rigidly connected to said lock-bar, substantially as set forth.

3. In a car-coupler, the combination of the draw-bar having an opening in the bottom, the lock-bar supported and confined therein and having the elongated slot which registers through said opening, and the operating lever having its inner end T shaped and adapted to enter said slot and to be turned athwart the same to secure the lever to the lock-bar when said lever is in its operative position, substantially as set forth.

4. In a car-coupler of the character set forth, the herein described means for automatically effecting the uncoupling of the draw-bar when the latter starts to pull out, the same comprising a beveled part rigid with the lock-bar, said part during the forward movement of the draw-bar adapted to strike against a stationary part to operate the lock-bar, substantially as set forth.

5. In a car-coupler, the combination of the draw bar, the support for the same, and the lock-bar resting within the draw-bar and having a beveled lug depending below said draw-bar through an opening therein, whereby when the draw-bar is pulled forward said lug will strike against the stationary part and thereby elevate the lock-bar, substantially as set forth.

6. In a car-coupler, the combination of a draw-bar having an opening in the bottom thereof, the stationary support for the draw-bar, and the gravity lock-bar having a beveled lug depending therefrom through said opening and in the immediate rear of such stationary part, whereby when the draw-bar is pulled forward said lug will strike the stationary part and elevate the lock-bar, substantially as set forth.

7. In a car-coupler, the combination of the draw-bar, the lock-bar supported and confined therein and capable of being elevated to release the coupling knuckle, and means carried by said lock-bar and co-operating with a stationary part of the car for automatically elevating said lock-bar to effect the uncoupling when the draw-bar is pulled forward, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRED ENOS.

Witnesses:

T. W. SMITH, Jr.,
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