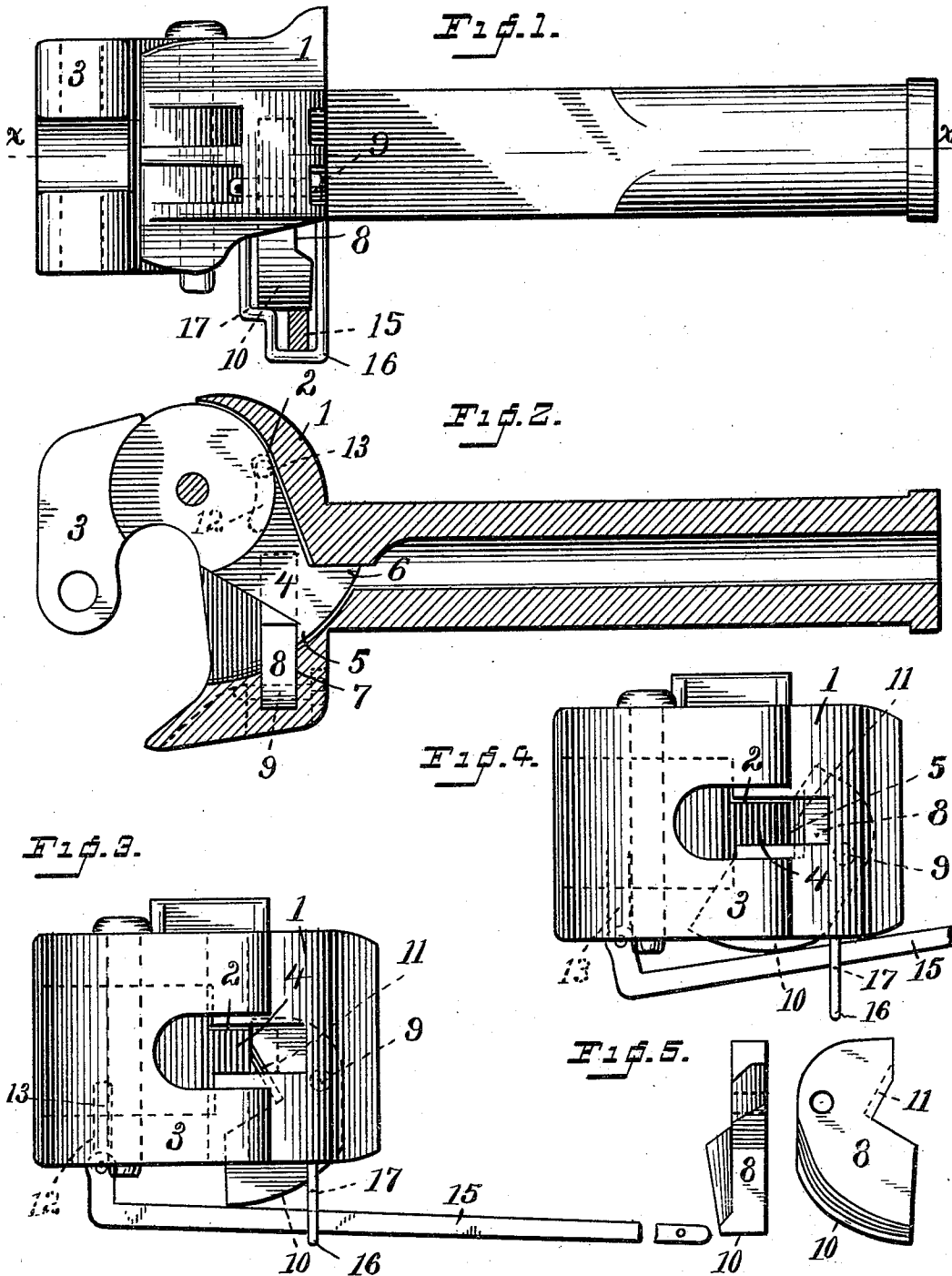


(No Model.)

F. ENOS.
CAR COUPLING.

No. 466,119.

Patented Dec. 29, 1891.



WITNESSES

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UNITED STATES PATENT OFFICE.

FRED ENOS, OF BRIDGEPORT, CONNECTICUT.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 466,119, dated December 29, 1891.

Application filed August 24, 1891. Serial No. 403,558. (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 improvements in that class of car-couplers known as the "master-car-builder type" of the well-known Janney coupler; and the objects are to produce, first, a car-coupler which shall be simple, durable, and inexpensive; second, a coupler which may readily be released while at a tension, and, third, one in which the knuckle will be automatically locked when closed.

In order that those skilled in the art to which my invention appertains may fully understand its construction and method of operation, I will describe the same in detail, referring by numerals to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a side elevation of my improved coupler with the knuckle closed. Fig. 2 is a horizontal section on the line xx of Fig. 1. Fig. 3 is a front elevation corresponding with Figs. 1 and 2. Fig. 4 is a similar view showing the hand-lever and pawl raised and the knuckle free to open. Fig. 5 shows, respectively, an end and side elevation of the pawl.

In the drawings, 1 represents a draw-bar head having a suitable recess 2, which receives the tongue of the swinging knuckle 3, which latter is pivoted within said recess to the draw-bar in the usual manner. This tongue is provided upon its inner side with a projection 4, having a shoulder 5 and an enlargement 6, with a curved face, the functions of which will presently be more fully explained. Within the head of the draw-bar I provide a slot 7 to receive a locking-pawl 8, which is pivoted on a pin 9 within the draw-head. Said pawl is preferably formed with a rib upon one side, which gives additional cam-surface 10 upon its bottom edge, and an angular notch beveled on one end, as at 11. I pro-

vide a curved slot 12 in the bottom of the head of the draw-bar to accommodate a pin 13, which may move freely within it, one end being seated and adapted to turn in the bottom of the knuckle. To the other end of said pin is pivoted an operating-lever 15, which in practice extends out to the side of the car, thereby avoiding the necessity of the operator at any time entering between the cars. This lever is held in its proper position by a guide or housing 16, which is suitably attached to the draw-head. This housing is formed with a shoulder 17, on which the operating-lever can be held in its raised position, as in Fig. 4, when it is desired to unlock the coupler and leave it unlocked. By suitable connections (not shown) this lever can readily be operated from the top of the car and held in an unlocked position.

When the draw-heads are forced together for the purpose of effecting a coupling, the knuckles will be swung upon their axes as they come together, thereby forcing the tongues backward into the recesses in the draw-heads until the pawls may drop downward across the faces of the shoulders 5, thereby locking both the knuckles in position. The pawls are held in the raised position, as in Fig. 4, while the knuckle is open, or partially so, by means of their engagement with the enlargements 6. At this time the bevel surface 11 of the pawl will engage against the periphery of the enlargement 6 on the tongue until the latter passes the pawl, which will then drop, as before stated.

The parts of the coupler are so constructed that the strain comes principally upon the pin to which the knuckle is pivoted, and therefore the pawl can be readily operated by means of the lever while at a tension or otherwise.

Through the connection which exists between the lever and the knuckle the latter may be opened or closed upon its hinge-joint by a slight push or pull upon the lever in the direction of its length. For instance, it is necessary to open the knuckle to put the parts in position for automatic coupling; but for link-and-pin coupling the knuckle must be closed, as is the case with all couplers of this type.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

1. In a car-coupler of the character described, the combination of the following elements, namely: the draw-head, the knuckle hinged therein, the pin secured upon said knuckle and extending outward through the bottom of the draw-head, the locking-pawl adapted to co-operate with the knuckle, and the operating-lever having engagement with the knuckle to impart a swinging movement thereto and having also a vertical movement against the locking-pawl, substantially as described.

2. In a car-coupler, the combination, with the draw-head, of the knuckle hinged thereto and provided with a shoulder on its inner end, a gravitating locking-pawl pivoted within the draw-head and adapted to lock past the shoulder on the knuckle when the latter is closed, and the operating-lever engaging the lower surface of the locking-pawl below the draw-head, the whole adapted to operate substantially as described.

3. The combination, with the recessed draw-head, of the swinging knuckle, a shouldered projection upon said knuckle adapted for engagement by the pawl, and the part 6, whereby the pawl is held in its raised position, a lever pivoted to a pin on the knuckle and adapted therethrough to swing the latter, and the loop 16, having shoulder 17, whereby the lever may be held in its raised position, substantially as described.

4. In a car-coupler, the combination, with

the recessed draw-head, of the knuckle hinged thereto and provided with the tongue 4, having thereon the vertical-faced shoulder 5, the curved surface 6, and the pivoted locking-pawl 8, adapted to drop in front of the shoulder 5 for the locking of the knuckle or to engage against the curved surface 6 when the knuckle is unlocked, substantially as described.

5. In a car-coupler, the combination, with the recessed draw-head, of the swinging knuckle hinged therein and provided with a locking-shoulder, a gravitating locking-pawl adapted to engage said shoulder, and an operating-lever pivotally attached to the knuckle and passing beneath the pawl, said lever adapted by a movement in the direction of its length to swing the knuckle and by a vertical movement on its fulcrum to actuate the pawl, substantially as specified.

6. The combination, with the draw-head and the hinged knuckle, of the locking-pawl pivoted within the draw-head by the pin 9, said pawl having the cam-surface 10 upon its bottom edge and also the bevel 11 at one end, and a pivoted operating-lever adapted to engage and actuate said pawl from beneath, substantially as specified.

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

FRED ENOS.

Witnesses:

FRANK L. RODGERS,
C. M. NEWMAN.