(No Model.)

L. MENDELSON.

CAR COUPLING.

No. 575,612. Patented Jan. 19, 1897.

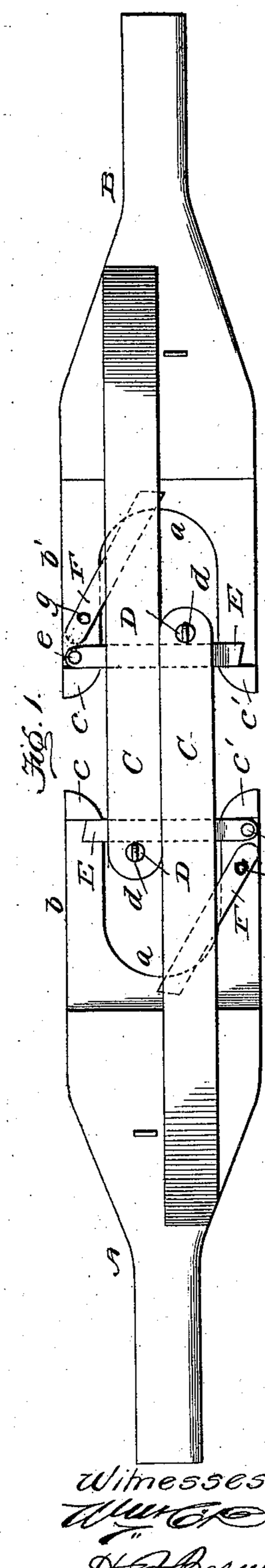

Fig. 1.

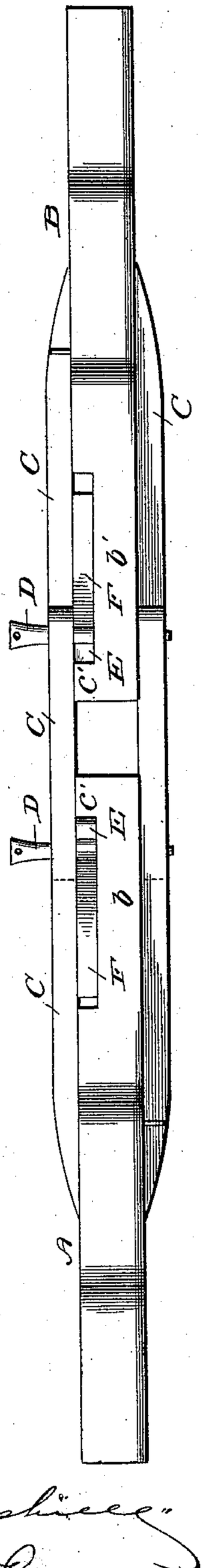

Fig. 2.

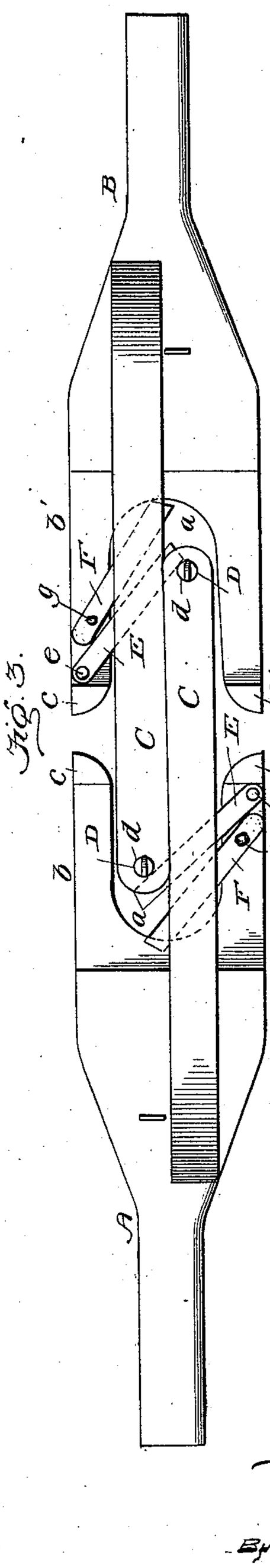

Fig. 3.

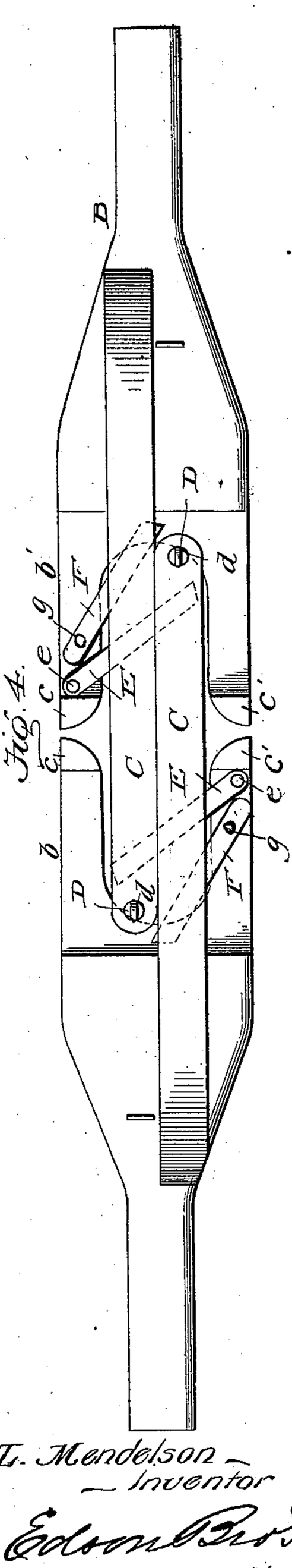

Fig. 4.

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UNITED STATES PATENT OFFICE.

LOUIS MENDELSON, OF SAN DIEGO, CALIFORNIA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 575,612, dated January 19, 1897.

Application filed September 9, 1896. Serial No. 605,305. (No model.)

To all whom it may concern:

Be it known that I, LOUIS MENDELSON, a citizen of Mexico, residing at San Diego, in the county of San Diego and State of California, 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 car-couplers of that class which employ horizontally-movable latches acting in conjunction with pins on the draw-heads; and the object of the invention is to produce a simple structure which will effect the coupling of the cars automatically when they approach each other, thus reducing to a minimum the liability of accidents.

With these ends in view my invention consists in the novel combination and construction of parts, as will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment of the same in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view showing a coupling embodying my invention. Fig. 2 is a side elevation. Figs. 3 and 4 are detail views illustrating different positions that the latch and detent assume in the act of coupling.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A B designate the two draw-heads of a car-coupler embodying my invention. Each draw-head is constructed in a peculiar way to provide the pin-receiving recess *a* and the forks *b b'*, the latter being arranged to form the recess *a* between themselves. At the front end of the forks *b b'* are the upwardly-extending lugs *c c'*, which serve as abutments or stops for the latch presently described. The draw-head is further provided with an arm or arms C C, which may be made integral with the draw-head or they may be attached thereto. These arms are arranged to one side of and parallel to the median line of the draw-head, and they project forwardly beyond the draw-head for a distance equal at least to the depth of the pin-receiving recess *a*. At the forward ends of the arms C pin-holes *d* are provided for the reception of the coupling-pins D D.

E E are the latches on the draw-heads A B. Each latch is arranged in a horizontal position across the draw-head, between one arm C and the fork *b*, and one end of said latch is pivoted at *e* to the fork *b* of the draw-head, the vertical pivotal point of the latch lying close to the abutment *c*. The latch is adapted to swing or turn in a horizontal plane and to span the pin-receiving recess *a* between the forks of the draw-head, so that the latch lies in the path of the coupling-pin when it enters said recess. The free end of the latch is adapted to rest upon the fork *b'* of the draw-head when the cars are coupled, and the forward movement of the latch, under the pull of the coupling-pin when the train is in motion, is arrested by the free end of the latch coming in engagement with the abutment or stop *c'* on the fork *b'*.

F F are the detents which serve to control the movement of the latches. Each detent is arranged in a horizontal position on one draw-head adjacent to the latch thereon, and the detent is pivoted by a vertical pin *g* to the fork *b* of the draw-head at a point closely adjacent to the pivotal point *e* of the latch E, said pivotal pin *g* being arranged to make the latch F form a compound lever with arms of unequal length, the short arm of said lever being adjacent to the pivoted heel of the latch. The pivotal ends of the latch and detent, or, in other words, the short arm of the detent and the heel of the latch, are rounded somewhat, as shown, and said parts are so disposed that under certain conditions they do not contact with each other in order to permit the latch and detent to move independently, but in certain other positions the short arm or heel of the detent is arranged to press against the heel of the latch and to move the latter to a position to interpose the latch in the path of the coupling-pin. Normally the latch occupies a position at right angles across the draw-head and the pin-receiving recess *a* therein, while the detent assumes an inclined position to the latch diagonally across the draw-head.

The operation of coupling the cars may be described as follows: With the latches and detents in their normal positions and with the pins D D in the forward ends of the arms C C on the draw-heads the cars approach each other in position for the arms C to embrace the draw-heads. As the pins D strike the latches E the latter are moved or swung rearward for limited distances as the pins enter the recesses *a* and without influencing the detents, but when the latches and pins reach the positions shown by Fig. 3 of the drawings the heels of the latches impinge against the detents to throw them forward somewhat from their normal positions, so that the continued rearward movement of the latches and the forward movement of the detents bring the parts to a position nearly parallel to each other, at which time the progressive movements of the pins D D into the recesses *a* carry the pins clear and to the rear of the latches, and the pins D are thus caused to strike the detents. As the pins strike the detents they are carried rearward and the heels of the detents act against the heels of the latches, as shown by Fig. 4, so as to throw the latches forward and interpose them in the path of the coupling-pins to prevent the latter from drawing out of the recesses *a* of the draw-heads when the train is started, the forward movement of the latches being arrested by the abutments or stops *c'* on the forks *b'* of the draw-heads.

It will thus be seen that I have provided a very simple construction and arrangement of parts which operate to couple cars automatically without requiring the brakeman to pass between the cars to adjust the pins when the cars are in the act of coming together.

To uncouple the cars, the pins D D are withdrawn from the holes *d* in the arms C C, and the draw-heads readily separate when the cars are drawn apart.

I am aware that changes in the form and proportion of parts and in the details of construction herein shown and described as the preferred embodiment of my invention may be made by a skilled mechanic without departing from the spirit or sacrificing the advantages of my invention, and I therefore reserve the right to make such modifications and alterations as fairly fall within the scope of the invention.

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

In a car-coupler, the forked draw-head provided with a pin-receiving recess and with an apertured rigid arm C which projects forwardly beyond the forked part of the draw-head, combined with a latch pivoted to one arm of the draw-head and arranged to span the recess therein, a detent pivoted to the draw-head adjacent to the pivotal point of the latch, and a pin fitted in the apertured arm C and arranged to strike a latch and detent on an approaching draw-head, substantially as described.

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

LOUIS MENDELSON.

Witnesses:
W. M. COLBURN,
JAMES T. BLACK.