

(No Model.)

C. E. FOX.  
CAR COUPLING.

No. 387,062.

Patented July 31, 1888.

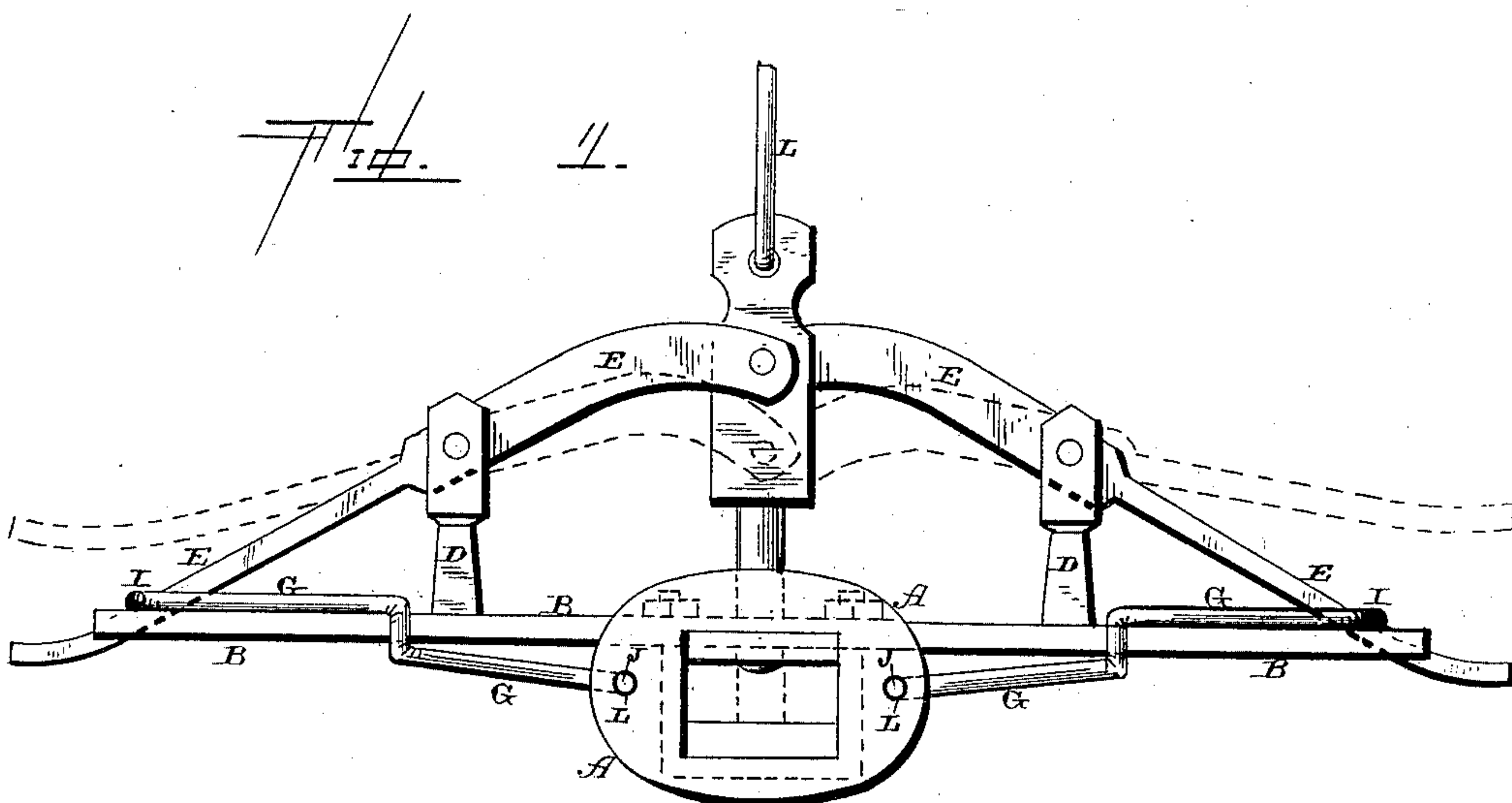


Fig. 1.

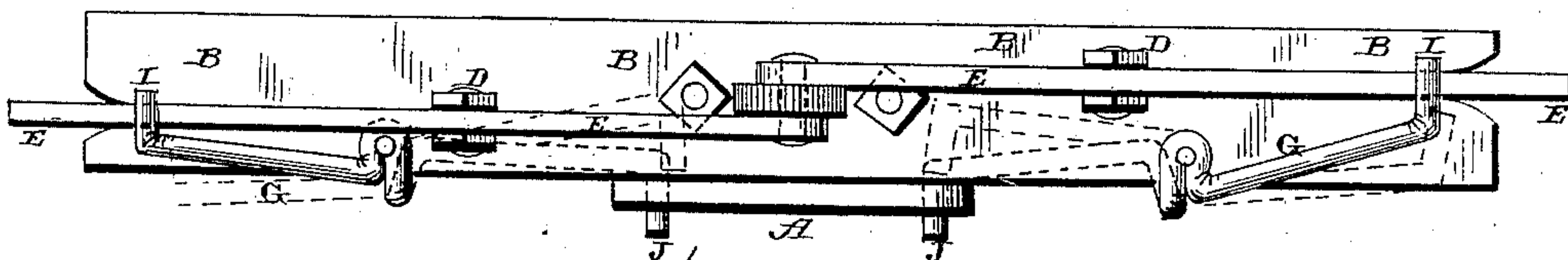
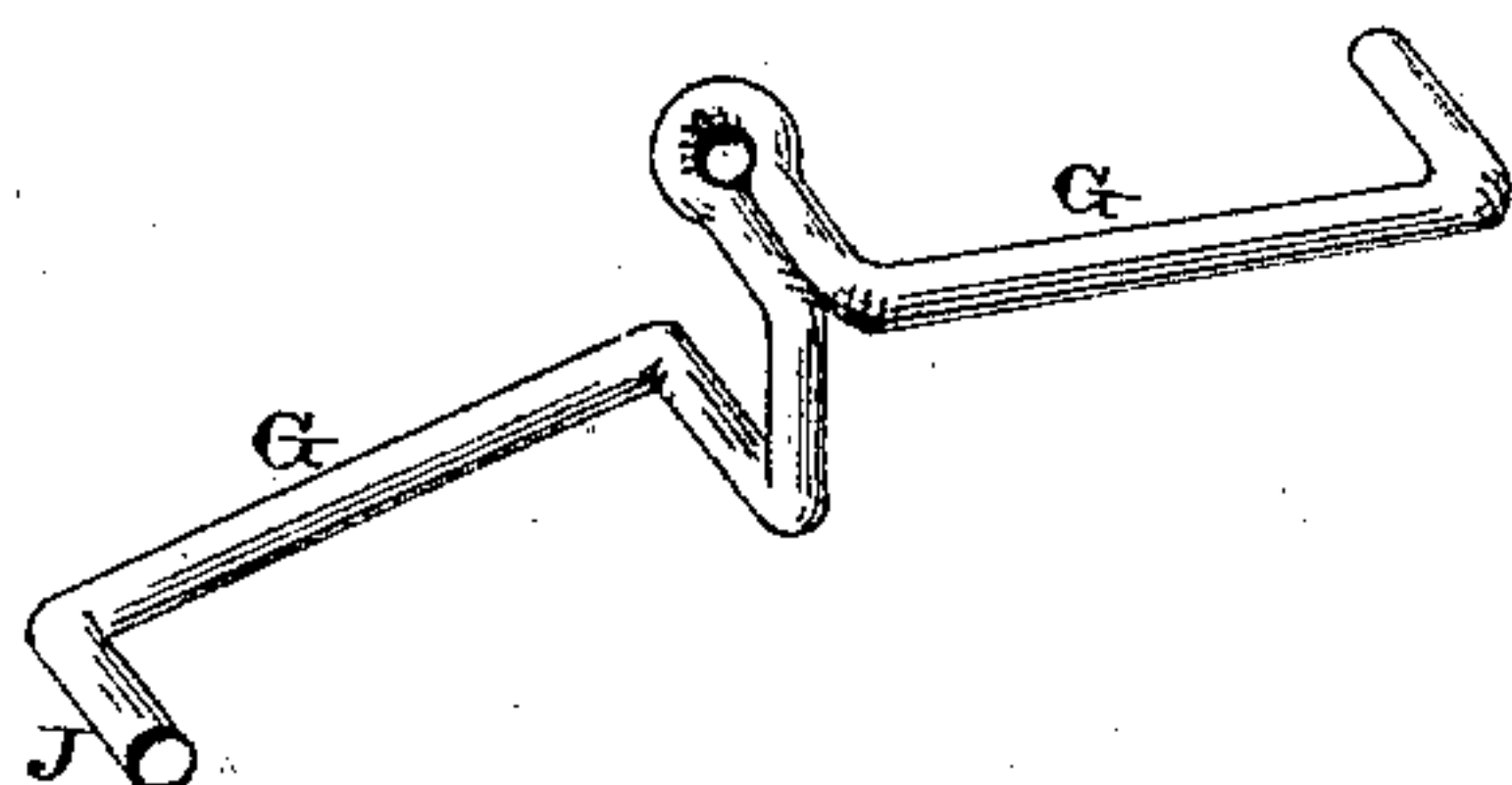


Fig. 2.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

CHARLES E. FOX, OF MEADVILLE, MISSISSIPPI.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 387,062, dated July 31, 1888.

Application filed January 25, 1888. Serial No. 261,880½. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. FOX, of Meadville, in the county of Franklin and State of Mississippi, have invented certain new and useful Improvements in Automatic Car-Couplings; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in automatic car-couplings; and it consists in the combination of two pivoted levers, the coupling-pin which is connected to the inner ends of the levers, and two pivoted rods which extend toward each other across the end of the car and which have their outer ends so bent as to be adapted to catch over the tops of the levers and have their inner ends turned outward at right angles and made to extend through the flanges on the sides of the draw-head, as will be more fully described hereinafter.

The object of my invention is to provide a car-coupling which is automatic in its operation, so as to prevent the necessity of the brakeman entering between the cars for the purpose of coupling them and thus risk life and limb, and to provide a tripping device which can be applied to any of the cars now in use and which will be operated by the running of the cars together, so as to release the coupling-pin and couple the cars.

Figure 1 is a front elevation of a car-coupling embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a detached view of one of the coupling-rods.

A represents the draw-head, which may be of any desired construction and which will be secured to the end of the car in any suitable manner. As here shown, this draw-head is secured by means of a clip to the under side of the metallic or wooden plate B, which extends across the end of the car; but if so desired this plate may be entirely done away with and the draw-head secured directly to the timbers of the car in the usual manner. This plate is used simply for the sake of pivoting the tripping levers or rods upon it and for securing the standards in which the levers are pivoted; but these parts may be secured di-

rectly to the timbers of the car, if so preferred. Rising from this plate, or from the timbers of the car, just as may be preferred, are the two standards D, in which the operating-levers E are pivoted. The inner ends of both of these levers are pivoted to the upper end of the coupling-pin, which may either be of the shape here shown or any other that may be preferred.

One or both of the levers may be provided with a slot where the pivotal pin passes through it and the standard for the purpose of allowing a free play of the parts as the pin is moved vertically. In the outer ends of the plate B are made open-ended slots, into which the outer ends of the levers sink when the pin is raised for coupling, and over the depressed outer ends of these levers the outer ends, I, of the automatically-acting tripping-levers G catch for the purpose of holding the coupling-pin in a raised position. The tripping-levers G are shaped as shown in Fig. 3, and have their outer ends, I, turned horizontally backward, so as to catch over the upper edges of the outer ends of the operating-levers E, and have their centers bent or shaped, as shown, so that pivotal pins can be passed through them in order to secure them to the plate or the end of the car, as may be preferred. The inner ends of the tripping-levers are turned horizontally forward and project through openings L made in the sides flanges upon the front end of the draw-head. These ends J project forward sufficiently far to be struck by the draw-head of the next car when the cars run together, and by forcing these ends J backward the outer ends, I, of the tripping-levers are forced backward from over the top edges of the operating-levers, and the operating-levers then allow the coupling-pin to drop.

The coupling-pin is sufficiently heavy to cause the inner ends of the operating-levers E to instantly drop as soon as the tripping-levers are moved, and thus no springs of any kind are required.

As the tripping-levers extend horizontally across the end of the car, they can be applied to any car now in use without the necessity of having dead timbers or other parts arranged to receive them, as has heretofore been the case. The bends at the centers of these levers where they are pivoted upon the plate is just sufficiently great to allow the inner ends, J, to be



moved backward through the flange of the draw-head without any danger of their being broken or being forced backward beyond a certain point.

5 Through the upper end of the coupling-pin is made an opening, into which a rod, L, is fastened, and which rod extends up to the top of the car, so that the coupling-pin can be operated from that point. The pivotal pins  
10 which pass through the standards and the levers E will be spring-pins, which can be instantly removed and replaced at any time, so as to allow the levers to be removed and replaced whenever so desired.

15 When it is desired to set the pins so that the cars will couple automatically, it is only necessary to depress the outer end of one of the levers E, and then force backward the outer end, I, of the tripping-lever, so that it  
20 will catch over the top of the outer end of the lever E, and thus hold the pin in a raised position. While the tripping-lever is holding the lever E and pin in position, the front end, J, of the tripping-lever is projecting through the  
25 flange of the draw-head sufficiently far so that when the cars run together the other draw-head will strike against this projecting end, and by forcing it backward and the outer end of the tripping-lever in the opposite direction,

when the outer end of the lever E will be released and the pin will instantly drop and couple the cars together. 30

Having thus described my invention, I claim—

1. In an automatic car-coupling, the combination of one or more tripping-levers which extend horizontally across the end of the car, and which are bent at their centers so as to be pivoted upon a plate or the timbers of the car, and which have their ends turned in opposite  
35 directions with the pivoted operating-levers, the coupling-pin, and the draw-head, substantially as shown and described. 40

2. The combination of the plate which extends horizontally across the end of the car, the tripping-levers which extend in a line with the plate and which have their ends turned at right angles, the standards mounted upon the plate or the end of the car, the operating-levers, the coupling-pin, and the draw-head, the  
45 parts being combined and arranged to operate substantially as set forth. 50

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

CHAS. E. FOX.

Witnesses:

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F. A. LEHMANN.