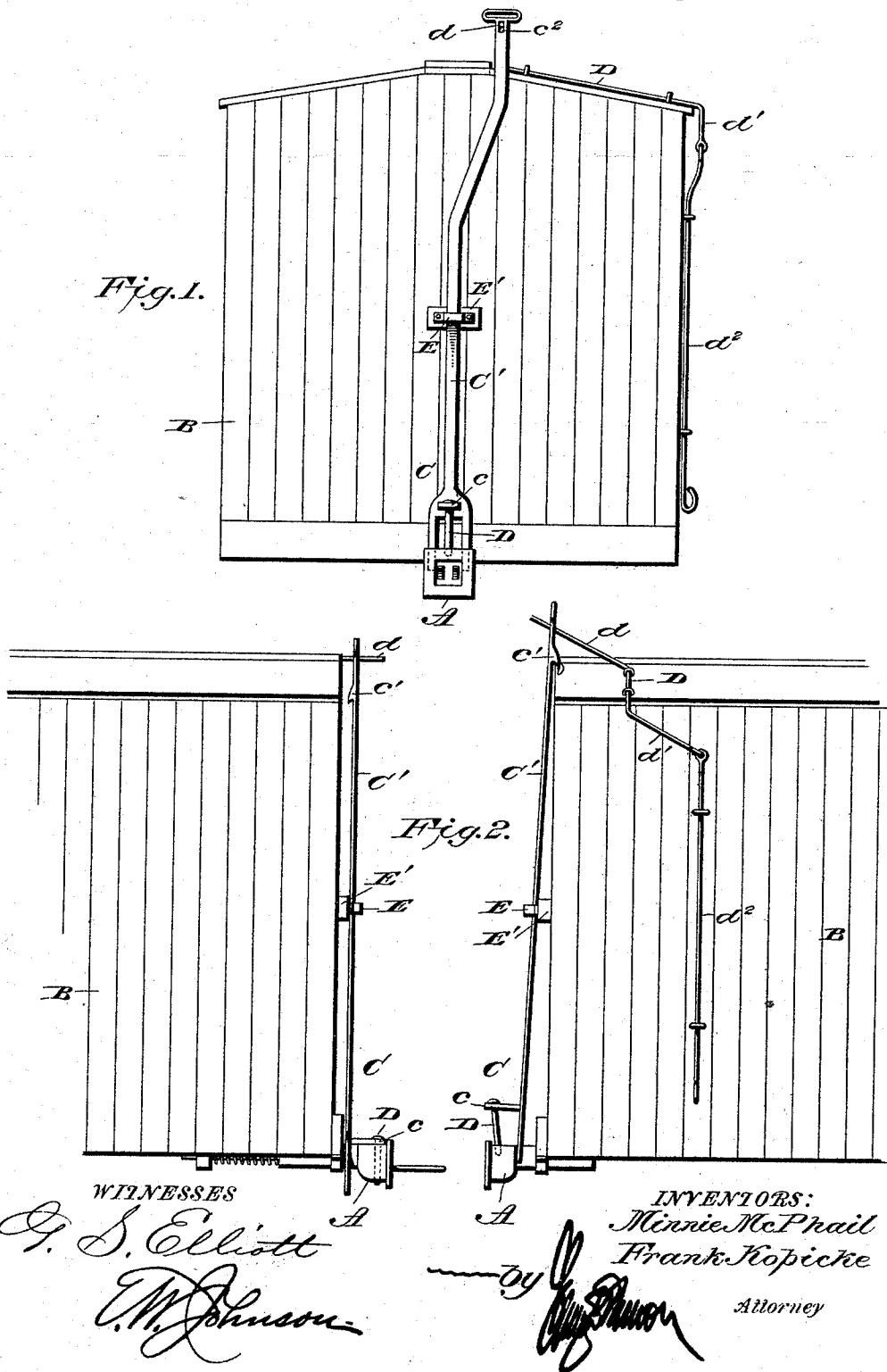


(No Model.)

M. McPHAIL & F. KOPICKE.
CAR COUPLING.

No. 526,632.

Patented Sept. 25, 1894.



UNITED STATES PATENT OFFICE.

MINNIE MCPHAIL AND FRANK KOPICKE, OF TAUNTON, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 526,632, dated September 25, 1894.

Application filed April 19, 1894. Serial No. 508,209. (No model.)

To all whom it may concern:

Be it known that we, MINNIE MCPHAIL and FRANK KOPICKE, citizens of the United States of America, residing at Taunton, in the county of Lyon and State of Minnesota, have invented certain new and useful Improvements in Car-Couplings; and we 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a car-coupling of the link and pin type with a pin support which will be automatically released and couple the cars when they come together; and it consists in an improved pin support which engages with a catch and is attached to the car in such manner that when released from the catch it will fall by gravity and cause the pin to drop into the apertures therefor in the draw head.

The invention further consists in the construction and combination of the parts, as will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of our improved coupling, showing the pin support elevated, and Fig. 2 is a side view showing two cars in position for coupling both having our improved coupling devices attached thereto.

A designates the drawhead which is attached to the truck-frame of the car B in the usual manner to provide for a limited longitudinal movement of the same, the rear part of the draw-bar being encircled by a helical spring to hold the drawhead normally projected.

The drawhead A is of the construction used with the link and pin coupling, being provided with the usual flared mouth, link chamber and vertical apertures to receive the coupling-pin. The drawhead is also provided with the usual spring plate for holding the forward end of the link elevated.

C designates a frame for supporting the coupling-pin D and causing it to engage the apertures in the drawhead, and it consists of

a bar C' which is bifurcated at its lower end to embrace the draw-bar rear of the drawhead and is provided with a forwardly-projecting arm c apertured to receive the coupling-pin, the upper end of the bar having a catch c' and a slot c² with which the crank portion d of a lever D engages for elevating the pin support. The pin support is held in position by a staple E which is driven into a block E' attached to the front end of the car, this connection permitting the said support to have a vertical movement and the ends of the same a movement to and from the car, the block E' acting as a fulcrum for this latter movement. The catch c² of the pin support is adapted to engage a recess at the upper edge of the car, and when in engagement therewith the pin support is held in an elevated position with the lower end of the coupling-pin within the upper aperture of the drawhead, in this position the parts being ready for couplings so that when the cars come together the rearward movement of the drawhead will throw the lower end of the pin support which will move the catch at the upper end of the same out of engagement with the recess, the said pin support then falling by gravity carrying with it the coupling-pin which passes through the link-chamber and into the lower aperture in the draw-head.

The crank-shaft for elevating the pin support is journaled on top of the car and is provided at its inner end with an arm d which engages the slot c² in the pin support while its outer end is formed into a crank portion d' from which extends a rod d² to provide for rocking the shaft from the side of the car. It will be noted that as the crank-shaft is rocked to elevate the pin-support the inclination of the arm d will cause the upper end of said pin-support to ride upon the same and thus insure its engagement with the recess at the edge of the car.

The device hereinbefore described provides for positively coupling the cars when they come together, and the construction and arrangement of the parts is such that they are not liable to get out of order.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a car coupling, the combination, of a pin supporting bar C' bifurcated at its lower end for engagement with the draw-bar rear of the drawhead as shown and provided above
5 the drawhead with an outwardly projecting arm c apertured for the passage of the coupling-pin, the bar C' being connected to the car so as to be susceptible of a vertical and rocking movement, a catch or projection c'
10 for engagement with the top of the car to hold the coupling-pin elevated when the drawhead is projected, the parts being organized so that the coupling-pin is automatically released when the drawhead is retracted, substantially
15 as shown and for the purpose set forth.
2. In a car-coupling, the combination with a longitudinally movable drawhead having apertures for the coupling-pin, of a pin-support consisting of a bar bifurcated at its lower
20 end to embrace the draw-bar rear of the head thereof and provided with an arm to which the coupling-pin is attached the upper end of the bar being so shaped that it will be to one side of the center of the car, and provided
25 adjacent to its upper end with a catch which is adapted to engage the car, the pin-support being attached to the car to have a vertical and an oscillating movement thereon, sub-

stantially as shown and for the purpose set forth.

3. In an automatic coupling device for cars, the combination with a drawhead, a pin supporting bar C' which is bifurcated at its lower end for engagement with the draw-bar rear of the drawhead, said bar carrying the coupling-pin, a staple or guide E carried by the car body through which the bar C' passes so that the same can have a sliding and rocking movement, a catch c' for engagement with the car body, and a crank-shaft D one member of which passes through the bar C' and the other is engaged by a rod d², substantially as shown, whereby when the member d of the crank-shaft is elevated the pin supporting bar C' will be moved upwardly and rearwardly so as to cause the catch to engage and hold the pin supporting bar elevated until moved on its fulcrum, for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

MINNIE McPHAIL.
FRANK KOPICKE.

Witnesses:

H. P. JOHNSON,
SAM McPHAIL.