G. H. & C. L. McGLOTHLEN.

Car-Coupling.

No. 168,041. Patented Sept. 21, 1875.

Fig 1

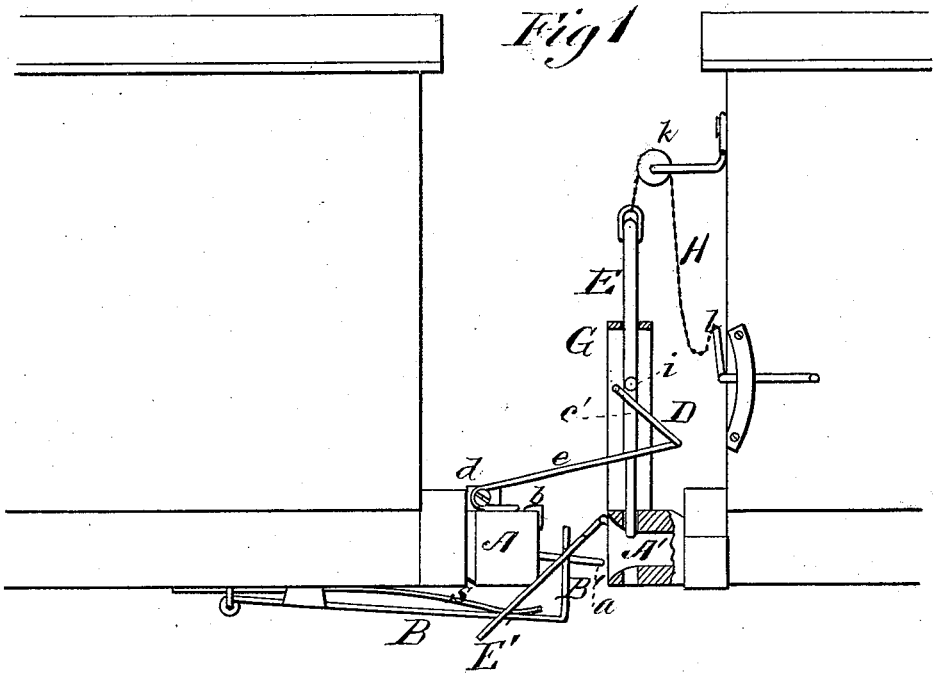


Fig 3

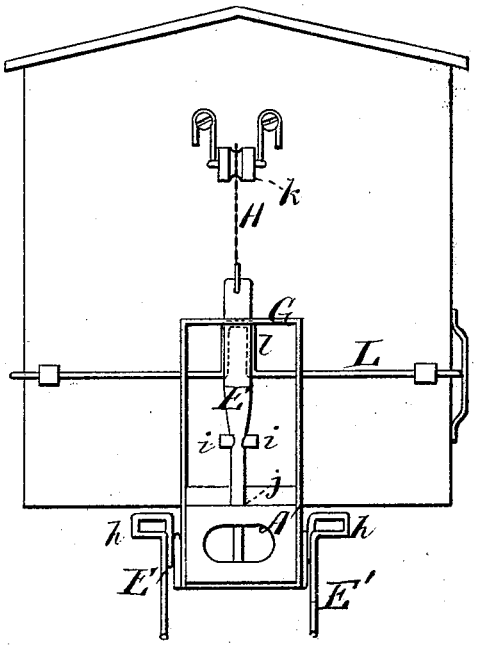
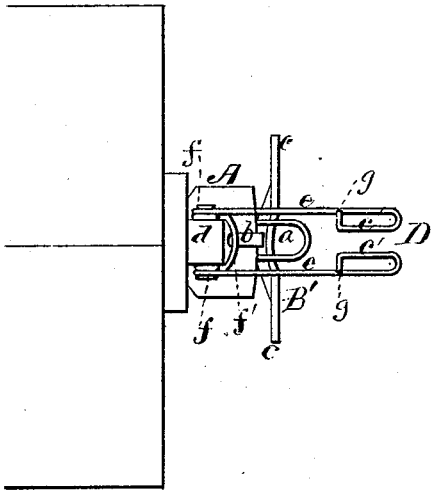


Fig 2



WITNESSES

Robert Everett

Walter C. Masi

INVENTORS

George H. McGlothlen,

Charles L. McGlothlen,

Dispman Howson & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE H. McGLOTHLEN AND CHARLES L. McGLOTHLEN, OF CLARINDA, IOWA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **168,041**, dated September 21, 1875; application filed August 21, 1875.

To all whom it may concern:

Be it known that we, GEORGE H. McGLOTHLEN and CHARLES L. McGLOTHLEN, both of Clarinda, in the county of Page and State of Iowa, have invented a new and valuable Improvement in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view, part in section, of our car-coupling; and Fig. 2 is a plan view thereof. Fig. 3 is an end view of the same.

This invention has relation to improvements in car-couplings wherein the usual pins and links are employed.

The object of the invention is to devise means whereby a link in the draw-head of one of two cars approaching to be coupled may be raised automatically to a horizontal position for entering the chambered draw-bar of the other at the same time that the coupling-pin is raised vertically out of the said draw-bar to allow of such entry, and for allowing the pin to fall through the link and effect a coupling when the entry of the latter shall have been completed.

To this end the nature of the invention consists in means, substantially as hereinafter described, for raising the link to a horizontal position, and in the means employed for raising and dropping the pin through the link, as will be fully understood from the following description.

In the annexed drawings, A A′ designate two chambered draw-bars, which are suspended from the ends of two railway-cars in the usual well-known manner, so as to have a slight vertical and lateral, as well as endwise, play. Draw-bar A is provided with an oblong coupling-link, *a*, which is held in position by means of a pin, *b*, and with a longitudinally-arranged link-lifter, B, the rear end of which is rigidly secured or pivoted to the rear end of the draw-bar, and is provided upon its front end with a cross-head, B′, under the link, and provided with handles or arms, *c*, at each end, for a purpose hereinafter explained. The top of this draw-bar is provided with a knob, *d*, through which is made, from side to side, a perforation adapted to receive and hold a strong bolt, on the projecting ends of which are coiled the arms *e* of a vertically-vibrating angular lifting or raising device, D, the object of which is to raise a coupling-pin, E, in draw-bar A′, under circumstances and by means hereinafter clearly set forth. Pin-lifter D is preferably formed of a strong metallic rod bent so as to form two eyes, *f*, by means of which it is connected to knob *d*, a stop, *f′*, by means of which the arms *e* of the lifter are held in a horizontal position, and at the ends of arms *e* two inclined portions, *c′*, extending rearwardly a certain distance and then bent outward to form arms *g*. Draw-bar A′ is provided with downwardly-inclined projecting rods, E′, arranged at each side, and provided with a bent portion, *h*, the object of which will hereinafter appear. When the two cars are caused to approach for the purpose of being coupled, the ends of rods E will become engaged under the handles *c* on the cross-headed link-raiser B, causing the latter to be thrown up, thus raising the link to a horizontal position, and allowing it to enter the chamber of draw-bar A′. At the same time the pin-lifter D will have its pointed front end engaged under pins *i* projecting from a preferably prismatic pin, E, which is applied in the usual well-known manner in draw-bar A′, causing the said pin to be raised free of the chamber in the said draw-bar, and allowing the pin to enter the same. The moment that the arms *g* on the end of lifter D pass beyond the vertical plane of the pin the arms *i* of the latter will escape from the restraint of the former, and will fall vertically through the slot of the link in the draw-bar. The pin and link being thus engaged the cross-headed link-raiser will fall through bends *h* in rods E to its normal position, ready set for subsequent operation, because of the reaction of a suitable spring, S, interposed between the said raiser and the draw-bar.

Pin E, as shown in figure, is guided during its upward and downward movements in a

frame, G, projecting up from the draw-bar, through which frame the upper end of the said pin passes. By this means it is prevented from tilting to one side and becoming jammed, so that it will fail, when released, to fall through the link. It is provided with a shoulder, *j*, which prevents it from penetrating unduly into the draw-bar. In practice, pin E will be raised in effecting an uncoupling by means of a chain or rope, H, attached to the upper end of the said pin, passing upward over a pulley, *k*, on the end of the car, and downward to a crank-arm, *l*, on a shaft, L, rotating in bearings on the end of the car; but it may be accomplished from the top of the car by means of a rod, rope, or chain.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a car-coupling, the combination of the draw-bar A, having link *a*, and a vertically-vibrating link-raiser, B, and an angular pin-lifting part, D, substantially as set forth.

2. The combination of a draw-bar, A, having link *a*, a vertically-vibrating link-raiser, B, and an angular pin-raiser, D, with a draw-bar, A′, having an endwise movable and guided pin, E, and rods or ways, E′, for raising the link-tifter B, substantially as specified.

3. The draw-bar A, having lifter B, provided at its front end with cross-head B′ and arms *c*, in combination with rods or ways E′ on draw-bar A′, substantially as described, and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

GEORGE H. McGLOTHLEN.
CHARLES L. McGLOTHLEN.

Witnesses:
CHARLES E. MAYS,
THOMAS B. McGLOTHLEN.