

(No Model.)

M. BRENNAN.

CAR COUPLING.

No. 344,158.

Patented June 22, 1886.

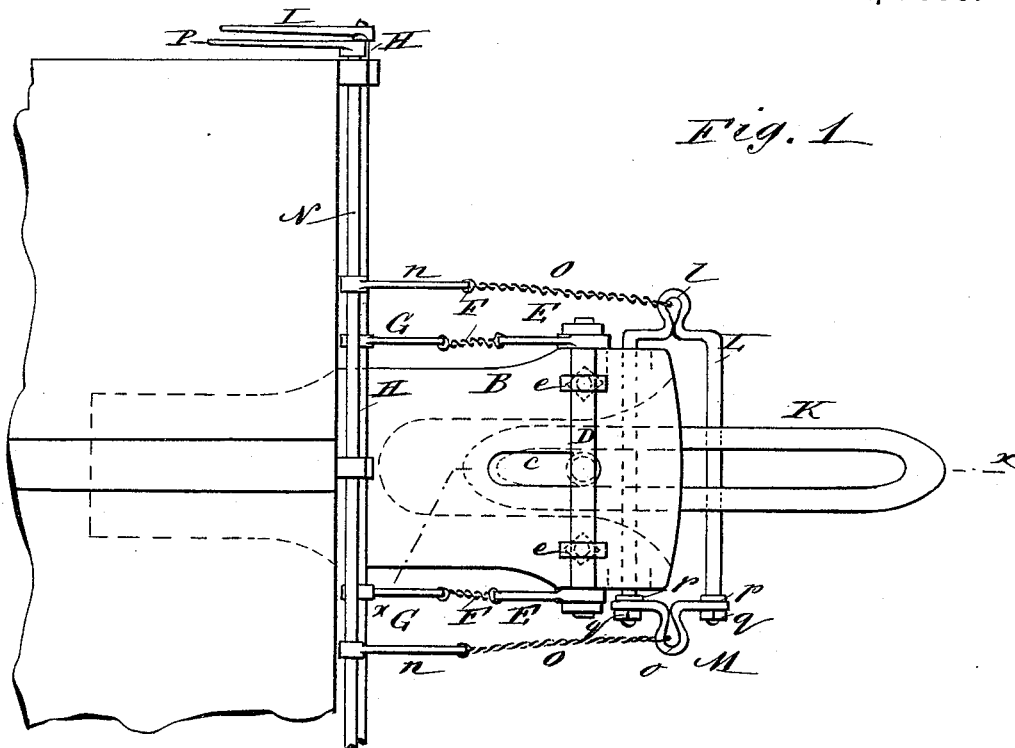


Fig. 1

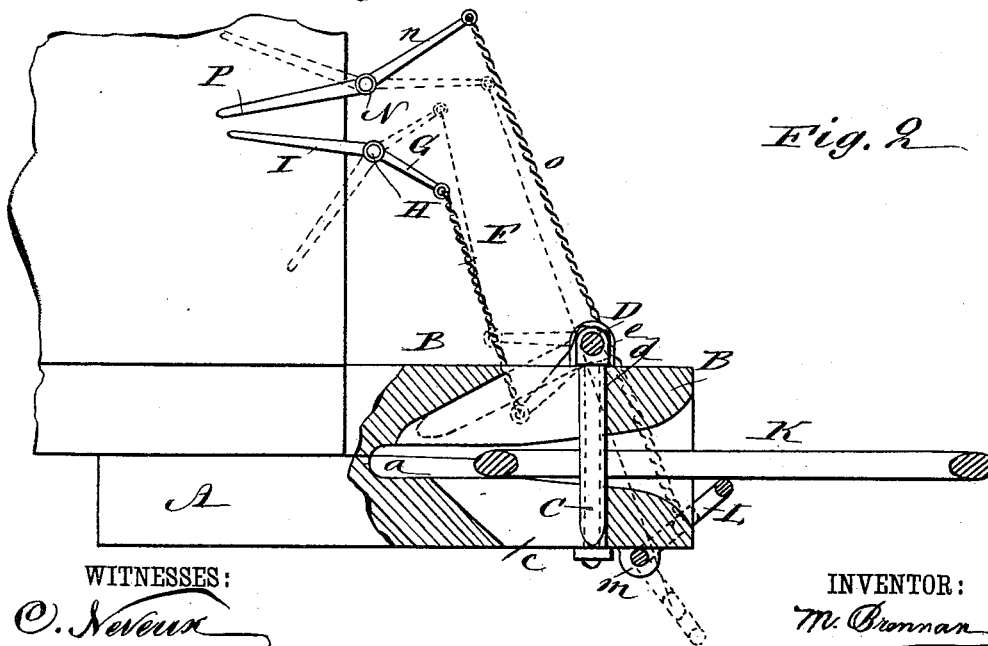


Fig. 2

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 344,153, dated June 22, 1886.

Application filed March 30, 1886. Serial No. 197,133. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW BRENNAN, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Car-Coupler, of which the following is a full, clear, and exact description.

My invention relates to the construction of an automatic car-coupler of peculiar and novel construction, arranged so that the cars may be uncoupled without entering the spaces between the cars.

To the end named the invention consists of a coupling-pin mounted on a rock-shaft and arranged to be folded back so as to be disconnected from engagement with the coupling-link; and the invention further consists of a novel form of link-lifter, whereby the link may be lifted to a position to permit of the coupling of the cars, as will be hereinafter explained, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of a portion of a car provided with my improved form of coupler; and Fig. 2 is a side elevation of the same, partly in section, on line *x x* of Fig. 1.

In constructing such a coupler as is illustrated in the drawings above referred to the draw-bar A is provided with a draw-head, B, that is formed with a deep link-opening, *a*, which gradually enlarges toward the projecting end of the draw-head. In addition to the ordinary link-opening, *a*, there is a vertical slot or opening, *c*, of which the forward defining-wall, *d*, is substantially vertical, but the rear walls are inclined, as clearly shown in Fig. 2, for a purpose that will be presently described. A coupling-pin, C, is carried by a rock-shaft, D, that is mounted in bearings *e e*, that are secured to the upper face of the draw-head, and this shaft D is provided with lever-arms E E, that are connected by chains F to lever-arms G G, that are carried by a rock-shaft, H, that is held in bearings secured to the end of the body of the car, the projecting ends of this rock-shaft H being provided with lever-arms I. From the construction described it will be readily understood that by moving either of the lever-arms I to the position indi-

cated by dotted lines in Fig. 2 the rock-shaft D will be turned so as to carry the coupling-pin C to the position indicated in the last-named figure, thus permitting the coupling-link K to enter the draw-head.

In order that the coupling-link may be lifted to a position to enter the draw-head of the approaching car, I provide a link-lifter, which consists, essentially, of a U-bolt, L, formed with an eye, *l*, and arranged so that one of its arms may be passed through apertures formed in the lugs *m*, which project downward from the under side of the draw-head. The projecting ends of the arms of the bolt L are united by a strip, M, formed with an eye, *o*, the ends of the strip being apertured to allow for the passage of the bolt-arms, the projecting ends of said arms being engaged by nuts *q q*, and the position of the strip M being defined by shoulders *p*, as shown. Instead of providing a U-bolt, however, two single bolts and two strips, as M, might be employed without departing from the spirit of my invention.

The link-lifter described is operated by means of a second rock-shaft, N, that is mounted on the end of the car, and provided with forwardly-extending arms *n n*, which carry chains O O, that are secured within the eyes *l o*. The shaft N is also provided with rearwardly-extending lever-arms P, one of such arms being arranged on each side of the body of the car, so that by moving either one of the arms P to the position shown in full lines in Fig. 2 the outer arm of the link-lifter will be drawn up against the under side of the coupling-link K, which link will consequently be raised to a position to enter the mouth of the draw-head of the approaching car, as will be readily understood, and when not so raised the bolt *l* will drop to about the position shown in dotted lines in Fig. 2, and will consequently be out of the way and will not be liable to injury. It will thus be seen that cars provided with my improved coupler and link-lifter may be coupled without the necessity of entering the spaces between the cars, thus avoiding all risk of accidents to the trainmen.

From the peculiar mounting of the coupling-pin C it will be understood that as the projecting end of the link K enters the mouth of the draw-head of the approaching car the said coupling-pin will be forced back to the posi-

tion indicated by dotted lines in Fig. 2, to allow the said projecting end of the link to fully enter the mouth of the draw-head, and after the link has passed the point of the pin the said pin will drop to its normal position, as shown in Fig. 2, thus coupling the cars together.

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

1. The combination, with a draw-head formed with a vertical slot, *c*, of a coupling-pin, *C*, a rock-shaft, *D*, to which said pin is secured, lever-arms *E*, carried by the rock-shaft, a second rock-shaft, *H*, mounted in bearings secured to the body of the car, lever-arms *G*, chains *F*, and manipulating-arms *I*, substantially as described.

2. The combination, with the draw-head, of the U-bolt *L*, having eye *l* and journaled to

the under side of the draw-head, the plate *M*, having the eye *o* and secured on the bolt *L*, the rock-shaft *N*, provided with arms *n* *P*, and the chains *O*, attached to the arms *n* and to the eyes *l* *o*, substantially as herein shown and described.

3. The combination, with a draw-head and its coupling-link, substantially as described, of a link-lifter consisting, essentially, of a U-bolt, *L*, formed with an eye, *l*, and a strip, *M*, formed with an eye, *o*, the strip *M* being held to the arms of the U-bolt by nuts *q* *q*, and a rock-shaft having arms *n* *n* and *P*, the arms *n* being connected to the eyes *l* *o* by chains *O* *O*, substantially as described.

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Witnesses:

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