(No Model.) 2 Sheets—Sheet 1.

T. L. McKEEN & J. W. GAUMER.

CAR COUPLING.

No. 342,703. Patented May 25, 1886.

Fig. 1

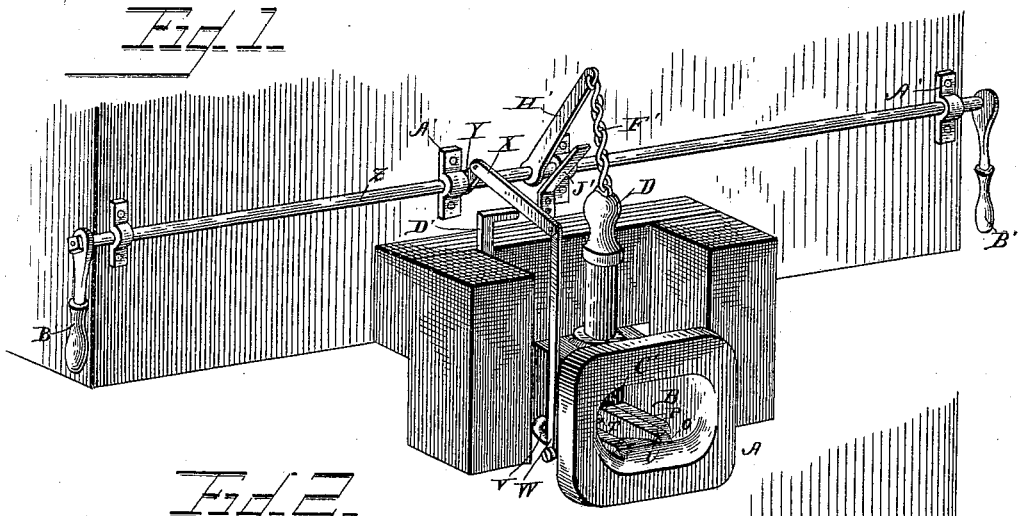


Fig. 2

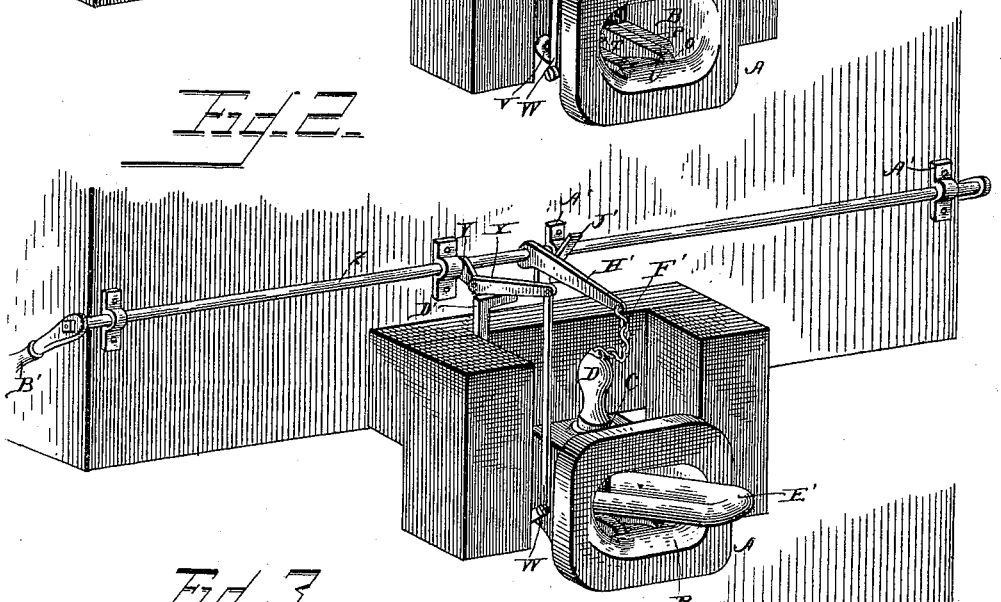
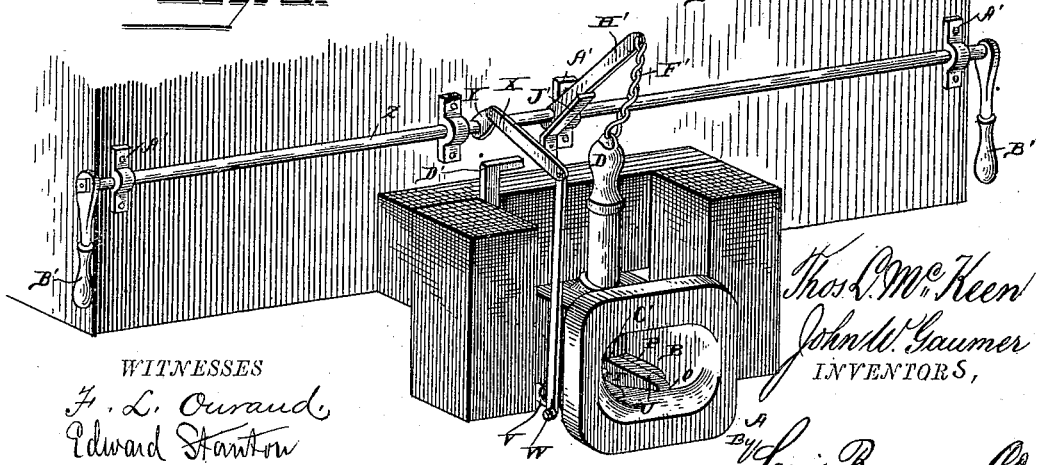


Fig. 3



WITNESSES

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Fig. 4.

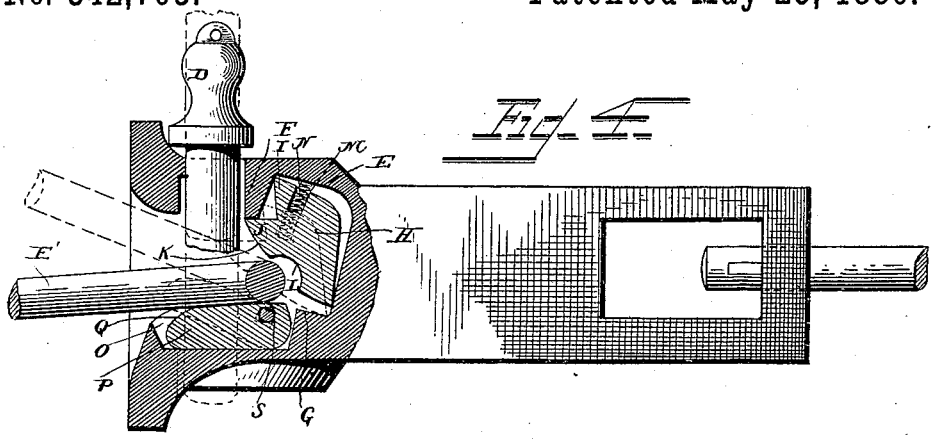
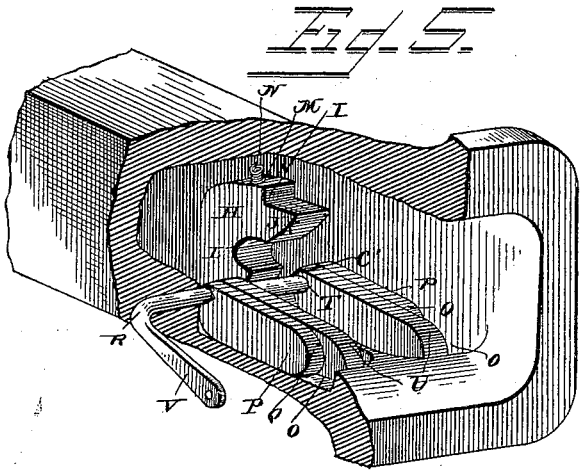


Fig. 5.



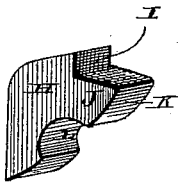


Fig. 6.

WITNESSES
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UNITED STATES PATENT OFFICE.

THOMAS L. McKEEN, OF EASTON, AND JOHN WESLEY GAUMER, OF WEISSPORT, PENNSYLVANIA; SAID GAUMER ASSIGNOR TO SAID McKEEN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 342,703, dated May 25, 1886.

Application filed March 29, 1886. Serial No. 196,972. (No model.)

To all whom it may concern:

Be it known that we, THOMAS L. McKEEN, of Easton, in the county of Northampton and State of Pennsylvania, and JOHN WESLEY GAUMER, of Weissport, in the county of Carbon and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplings; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of one end of a railway-car provided with our improved car-coupling, showing the pin raised. Fig. 2 is a similar view showing the link raised by the link-controller. Fig. 3 is a similar view showing the pin raised and held raised so as not to couple. Fig. 4 is a longitudinal vertical sectional view of the end of the car and of the draw-head. Fig. 5 is a perspective view of the draw-head, showing portions broken away; and Fig. 6 is a perspective detail view of the rocking block or latch.

Similar letters of reference indicate corresponding parts in all the figures.

Our invention has relation to automatic pin-and-link couplings for railway-cars; and it consists in the improved construction and combination of parts of a coupling, in which the pin may be raised and held raised, and in which the link may be guided by raising or lowering it by the same shaft and handles which raise the pin, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the draw-head, which is secured to the car in any suitable manner, and the top and bottom of the recess B of the draw-head are formed with vertical perforations C C, through which the pin D may pass. The upper side of the rear end of the recess is formed with an upwardly-inclined extension, E, which forms a lip, F, between it and the perforation for the pin, and the lower end of which is provided with a forwardly-inclined lip, G, near the bottom of the recess, and a block, H, fits and rocks in this extension, resting with its lower edge behind the inclined lip at the lower end of the extension, and resting with an upwardly-projecting portion, I, in the extension of the recess, the upper edge of this portion bearing normally against the rearwardly-facing side of the upper lip. The block or latch has a forwardly-projecting lip, J, against the upper side of which the end of the pin may rest when raised, the latch dropping forward by its own gravity, and the forwardly-inclined face K of the latch is formed with a rounded recess, L, for the reception of the end of the link. The upper face of the upwardly-projecting portion of the latch is formed with a recess, M, into which fits a coiled spring, N, having its end projecting beyond the recess, and this spring will be of sufficient strength to allow the block to hold the link projecting straight out when the pin is dropped, holding it in position for entering another draw-head, while it will allow the inner end of the link to be tilted slightly upward when coupling with a draw-head lower than the draw-head having the link, so that the spring will bear the strain from the link without allowing the said strain to be exerted upon other portions of the draw-head. The bottom of the recess in the draw-head is formed with two longitudinal recesses, O O, at the side edges of the bottom, and two cam-plates, P P, having their upper forward corners, Q, rounded, are pivoted at their rear ends upon a bar, R, having its ends journaled in the sides of the draw-head, and having its square portions fitting in square perforations S in the cam-plates, and turning in perforations T in the longitudinal ribs U U, forming the inner sides of the longitudinal recesses. One end of the bar or shaft upon which the cam-plates are secured is provided with a forwardly-projecting arm or shaft, V, to the outer end of which a connecting-rod, W, is secured with its lower end, and the upper end of this connecting-rod is pivoted to the outer end of a bar, X, the inner end of which is pivoted to an arm, Y, projecting outwardly from the operating-shaft Z, which is journaled in transverse bearings A′ upon the front of the car, and provided with handles or levers B′ B′ at its ends. The rear upper corners, C′,

of the cam-plates are cut off obliquely and will bear against the rear ends of the longitudinal recesses in the draw-head when the said cam-plates are raised, preventing the said plates from being tilted too far up. The bar pivoted to the arm of the operating-shaft and to the upper end of the connecting-rod rests near its inner end upon the upper edge of a bracket, D′, projecting from the end of the car and standing parallel to it, and it will be seen that when the transverse operating-shaft is tilted so as to depress the outer end of the arm upon the same the inner end of the bar pivoted to the said arm will be depressed and the outer end will be raised, raising the arm or crank of the shaft for the cam-plates, and raising the outer ends of the cam-plates, which will raise the link E′ when the latter is in the draw-head, the said parts serving as a link-controller for the purpose of directing the link into the opposite draw-head. The pin D, which fits in the perforations in the top and bottom of the draw-head, and which may rest upon the lips of the spring-cushioned latch when raised, is provided with a chain, F′, at its upper end, which chain is attached to an arm, H′, projecting from the operating-shaft, so that the link may be disengaged from the draw-head by raising the pin, when the operating-shaft is so tilted that the arm is tilted upward. The operating-shaft slides laterally in its bearings, and the arm connected to the pin may be slid to rest upon a bracket, J′, projecting from the front of the car, when the pin is raised and the arm tilted upward, thus preventing the pin from dropping down when the link enters the draw-head, and pushes the spring-cushioned latch backward and upward, enabling a car having the link projecting from its draw-head to be pushed against a car having its link thus raised and secured without coupling the same. In this manner the pin may be operated and retained and the link raised or lowered by the same handle and operating-shaft, simplifying the construction of the coupling and its accessories, and rendering it more practical and less expensive than couplings in which the pin is operated by one handle or shaft and in which the link is operated and guided by other means.

By means of the link-controller the link may be hooked upon a coupling having an upwardly-projecting hook, as well as be disengaged from it equally as well as the link may be connected with a coupling having a pin.

If by accident the cam-plates should be raised when the link is introduced into the draw-head, the said cam-plates will be prevented from being tilted farther up by their oblique corners bearing against the rear ends of the recesses for them, and the round corners of the outer ends of the cam-plates will allow the link to slide over them, and to force the plates down in their recesses.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In a car-coupling, the combination of a draw-head having longitudinal recesses in its bottom, and having a transverse bearing through the rear ends of the said recesses, a shaft rocking in the said bearing and having a forwardly-projecting arm at one end, and having cam-plates *e*, secured at their rear ends to it and resting in recesses, a transverse operating-shaft upon the end of the car, a bracket having its edge parallel with the shaft at a distance from the same, a bar resting upon the edge of the bracket and having its inner end pivoted to the arm projecting from the operating-shaft, and a connecting-rod pivoted to the outer end of the said bar and having its lower end pivoted to the end of the arm upon the cam-shaft, as and for the purpose shown and set forth.

2. In a car-coupling, the combination of a draw-head having longitudinal recesses in its bottom and a transverse bearing intersecting the rear ends of the said recesses, a shaft journaled in the said bearing and having means for rocking it, and cam-plates secured at their inner ends upon the shaft and having their forward upper corners rounded, and having their upper rear corners cut off obliquely to bear against the rear ends of the recesses, as and for the purpose shown and set forth.

3. In a car-coupling, the combination of a draw-head having a recess formed with vertical perforations in its top and bottom for the pin, and having an upwardly-inclined extension in its top, forming a downwardly-projecting lip between it and the upper perforation, and formed with a forwardly and upwardly projecting lip at its rear and lower end, with a block or latch having an upwardly-projecting extension formed with a recess and having its lower edge resting inside of the lower lip in the recess, and having a forwardly-projecting lip at its upper end for supporting the pin, and an inclined forward face formed with a rounded recess for the reception of the end of a link, said block or latch having a recess in its upper portion, and a coiled spring within and projecting from said recess, as and for the purpose shown and set forth.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

THOMAS L. McKEEN.
JOHN WESLEY GAUMER.

Witnesses:
O. R. McCORMICK,
JOHN S. NOBLE.