

No. 648,970.

Patented May 8, 1900.

P. LUCAS.
CAR COUPLING.

(Application filed Oct. 17, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. I.

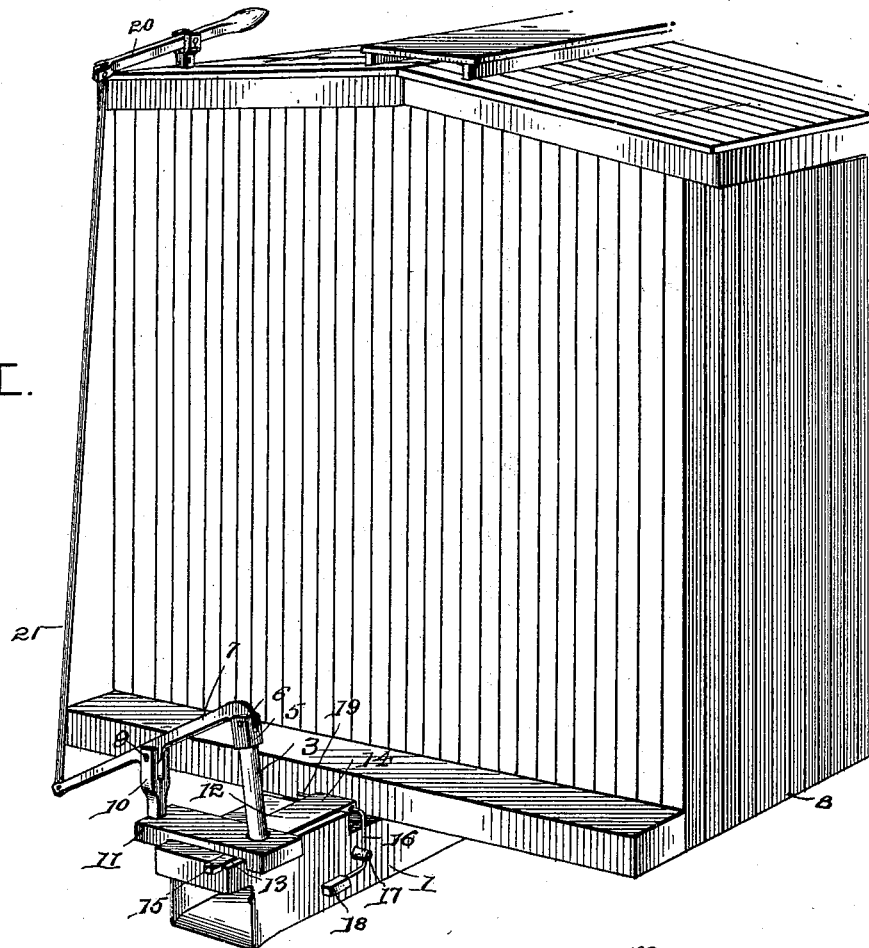
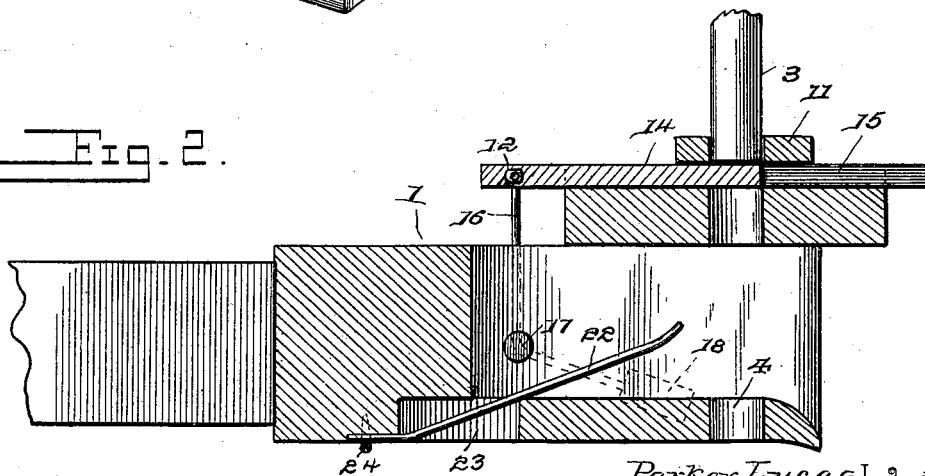


Fig. 2.



Witnesses

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Fig. 3.

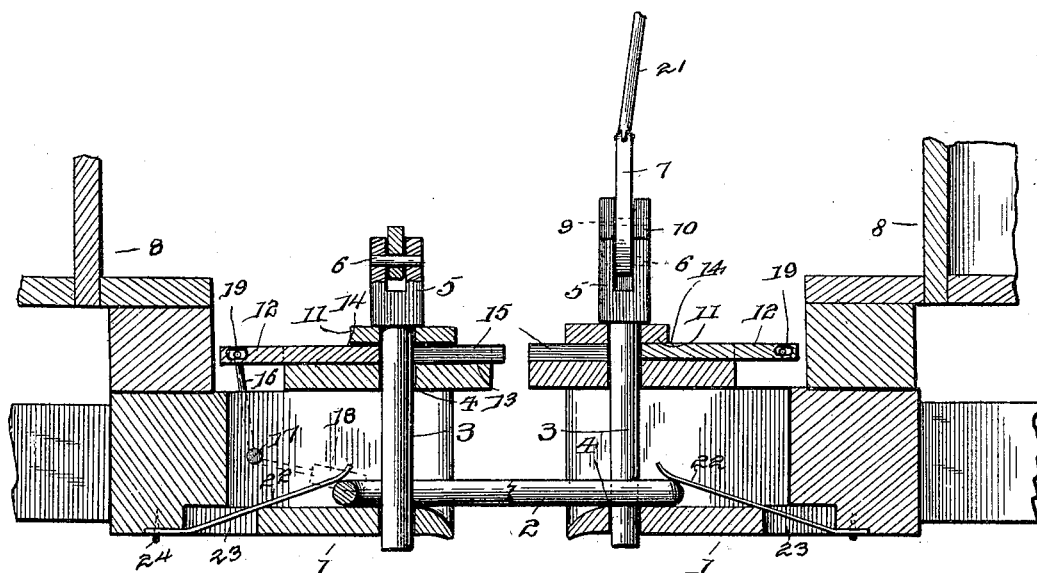
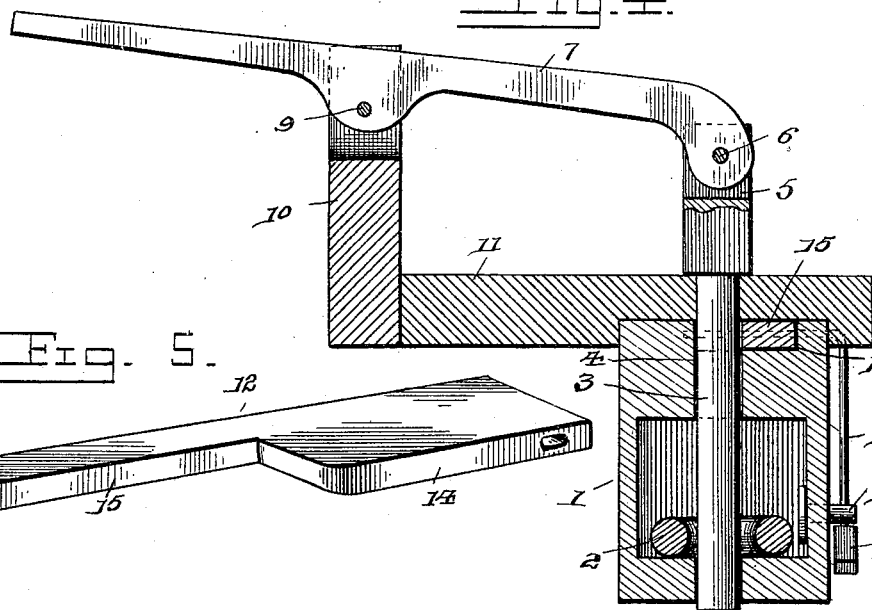


Fig. 4.



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UNITED STATES PATENT OFFICE.

PARKER LUCAS, OF SHERIDAN, WEST VIRGINIA, ASSIGNOR OF ONE-HALF
TO EVERMONT SPURLOCK, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 648,970, dated May 8, 1900.

Application filed October 17, 1899. Serial No. 733,941. (No model.)

To all whom it may concern:

Be it known that I, PARKER LUCAS, a citizen of the United States, residing at Sheridan, in the county of Lincoln and State of West Virginia, have invented a new and useful Car-Coupling, of which the following is a specification.

The invention relates to improvements in car-couplings.

One object of the present invention is to improve the construction of pin-and-link car-couplings and to provide a simple and comparatively-inexpensive one capable of coupling automatically and adapted to be readily uncoupled from the tops and sides of cars without going between them.

A further object of the invention is to provide a car-coupling of this character which may be readily set for automatic coupling from the top or sides of a car and which will be capable of supporting a link in a horizontal position for guiding it into the mouth of a draw-head.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a car-coupling constructed in accordance with this invention, the coupling-pin being supported in an elevated position for automatic coupling. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a longitudinal sectional view showing two draw-heads coupled. Fig. 4 is a transverse sectional view showing the pin in engagement with a link. Fig. 5 is a detail perspective view of the reciprocating pin-supporting slide.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a draw-head having a flaring mouth and provided with the usual longitudinal link-cavity to receive a link 2, which is engaged by a coupling-pin 3, arranged in a coupling-pin perforation 4 and adapted to be moved vertically to engage it with and disengage it from the link. The coupling-pin, which extends above the draw-head, is provided at its upper end with a bifurcated head

5, which is pivoted by a pin 6 or other suitable fastening device to the inner end of the lower uncoupling-lever 7, and the latter is disposed transversely of the car 8, to which the draw-head is secured.

The transverse lever 7 is fulcrumed at a point between its ends on a suitable pivot 9 of a post 10, bifurcated at its upper end to receive the lever and mounted on an arm 11, extending laterally from one side of the draw-head at the top thereof. The outer portion of the lever 7 is designed to be arranged within easy reach from the side of the car toward which it extends, so that it may be readily grasped by the operator without going between cars.

The coupling-pin is supported in an elevated position, as illustrated in Figs. 1 and 2 of the accompanying drawings, by a reciprocating slide 12, arranged at the top of the draw-head and mounted in a groove or way 13, which intersects the coupling-pin perforation. The slide 12 has a rear supporting portion 14 and a reduced front portion 15, which is adapted to extend beyond the front end of the draw-head in position to be engaged by another draw-head, whereby it will be moved inward when two cars come together for coupling. When the slide is moved rearward by this means, the support is withdrawn from beneath the coupling-pin, which is caused to fall and engage the link. The rear supporting portion of the slide extends laterally beyond the reduced front portion, which is offset from the plane of the coupling-pin perforation, and the groove or way, which conforms to the configuration of the slide, has its enlarged rear portion extending to the front wall of the coupling-pin perforation and forming a shoulder at that point to be engaged by the front end of the rear supporting portion 14 of the slide, whereby the forward or outward movement of the slide is limited.

The slide is thrown forward or outward when the coupling-pin is elevated, and it is freely moved in that direction by a weighted bell-crank lever 16, located at one side of the draw-head on the exterior thereof and fulcrumed at its angle on a pivot 17. The lower portion of the bell-crank lever extends forward or outward and is substantially horizon-

tal, being provided at its outer end with a weight 18, which actuates the slide, and the latter is connected at its rear end to an arm 19, extending horizontally from the upper end of the lever 16. The arm 19, which extends inward from the lever 16, is arranged in a perforation of the rear end of the slide, as clearly illustrated in Fig. 3 of the accompanying drawings. The pivot 17, which is provided at its inner end with a head, extends through one of the walls of the draw-head; but any suitable form of pivot may be employed for fulcruming the bell-crank lever 16.

When the lower uncoupling-lever 7 is operated to elevate the coupling-pin, the slide is automatically thrown forward by the weighted bell-crank lever and the coupling-pin is maintained in an elevated position for automatic coupling. When the slide is moved inward by reason of two cars coming together for coupling, the coupling-pin is caused to fall and engage the link. The lower uncoupling-lever is connected by a rod with an upper uncoupling-lever 20, fulcrumed on top of the car 8 and arranged at one side thereof in position to be readily operated to uncouple two cars and to arrange the coupling-pin in an elevated position for automatic coupling. The upper uncoupling-lever 20 is fulcrumed between its ends on a suitable support, and its outer end is connected with the upper end of the rod 21, which extends to the lower uncoupling-lever.

The upper uncoupling-lever extends longitudinally of the car, and its pivotal connection with the rod 21 permits the latter to oscillate longitudinally of the car to yield to the longitudinal movement of the draw-head.

In order to support the link in a horizontal position, the draw-head is provided in rear of the coupling-pin perforation with an outwardly-extending inclined spring 22, having its outer end free and arranged to engage the link, as clearly illustrated in Fig. 3 of the accompanying drawings. The rear end of the spring, which is secured to the bottom of the draw-head, preferably extends through a slot 23 thereof and is fastened to the lower face of the bottom by a screw 24 or other suitable fastening device. The free outer end of the spring is arranged to engage the inner end of the link, and it is capable of holding the same in a horizontal position for guiding it into the

mouth of another draw-head during the operation of coupling to obviate the necessity of going between cars to accomplish this result. The arrangement of the spring 22 is such that it will not be injured by a link entering the draw-head, and such link cannot affect the fastening device or devices for securing the spring to the draw-head.

It will be seen that the car-coupling is simple and comparatively inexpensive in construction; that it is positive, reliable, and automatic in its operation, and that it is capable of coupling and of being readily uncoupled without going between cars. The operation of uncoupling may be performed from the side of the car or from the top thereof, and the spring, which is adapted to support the link in a horizontal position, is arranged to be readily engaged by the same.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. In a car-coupling, the combination of a draw-head having a coupling-pin, a longitudinally-reciprocating slide mounted on the top of the draw-head and arranged to support the coupling-pin in an elevated position, and a weighted bell-crank lever fulcrumed on the draw-head at one side thereof and extending inward over the top of the same and connected with the slide, substantially as described.

2. The combination of a draw-head having a coupling-pin perforation and provided in rear of the same with an opening located at the bottom of the draw-head, and an inclined spring extending through the opening of the bottom of the draw-head, secured to the latter in rear of such opening and having its front or outer end free and located above the bottom of the draw-head in position for engaging a link, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PARKER ^{his} X LUCAS.
mark

Witnesses:

JOHN G. EVANS,
E. SPURLOCK.