

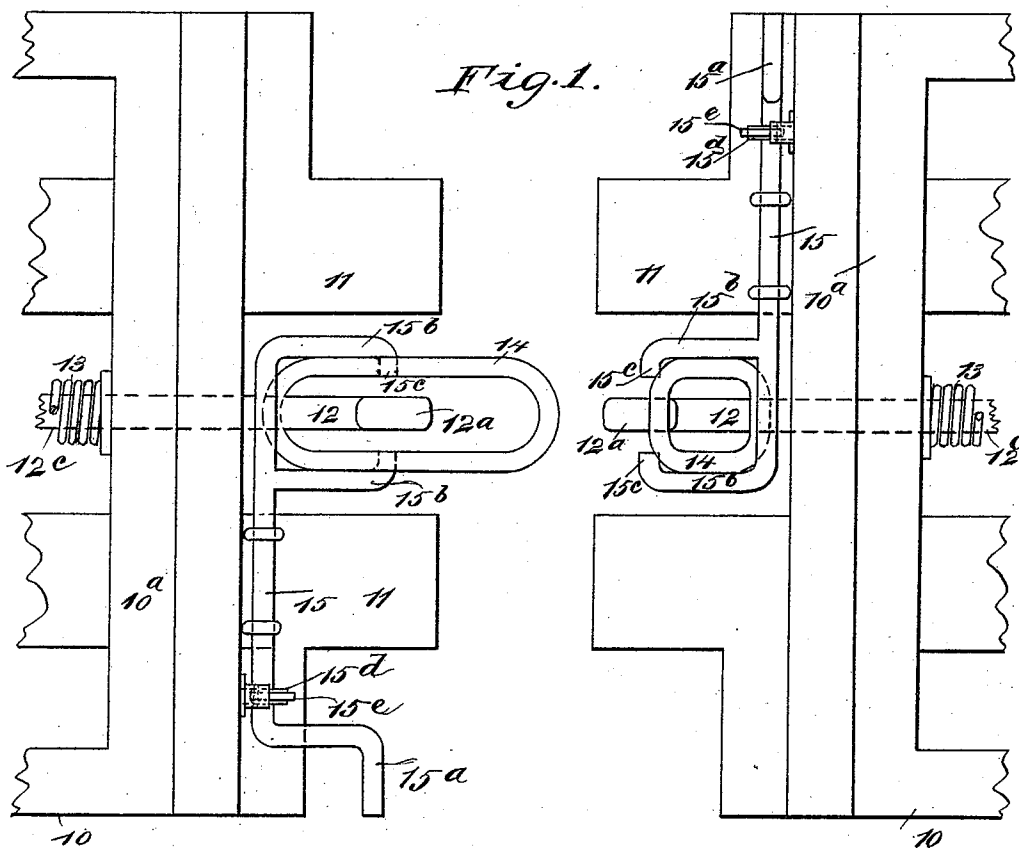
(No Model.)

2 Sheets—Sheet 1.

T. SEYFRIED.  
CAR COUPLING.

No. 525,234.

Patented Aug. 28, 1894.



WITNESSES.

*C. Sedgwick*  
*J. W. Mansford*

INVENTOR:

*T. Seyfried*  
BY *Munn & Co*  
ATTORNEYS

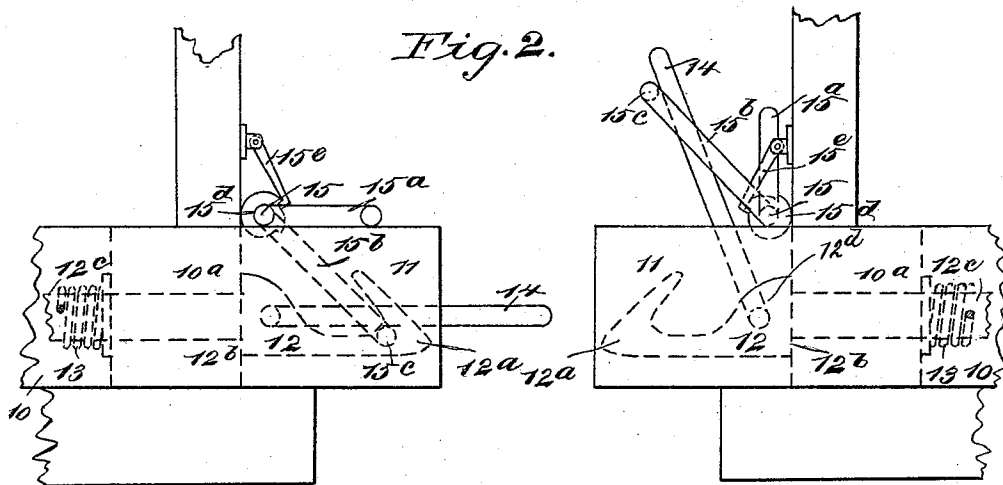
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# UNITED STATES PATENT OFFICE.

THOMAS SEYFRIED, OF UPPER NAZARETH, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 525,234, dated August 28, 1894.

Application filed February 10, 1894. Serial No. 499,745. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS SEYFRIED, of Upper Nazareth township, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improved Car-Coupling, of which the following is a full, clear, and exact description.

My invention relates to an improved car coupling of the link and hook type, and has for its object to provide a novel, simple car coupling of the type indinated, which will be adapted for the automatic coupling together of two cars having the improvement, and that will afford convenient and safe means for the detachment of two of the improved couplings at the side of the cars whereon said couplings are placed.

To these ends, my invention consists in the peculiar construction and combination of parts, as is hereinafter described and claimed.

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

Figure 1 is a plan view of two of the improved couplings on adjacent end portions of two car frames; and Fig. 2 is a side view of parts shown in Fig. 1.

In the drawings, 10 represents the front end portion of a car frame, and 11, two buffer blocks on said frame, which blocks are secured in place on the transverse end beam 10<sup>a</sup> of the car frame at an equal distance from a longitudinal center line, leaving a sufficient space between them for the introduction and support of the improved coupling at the center of width of the car frame.

The drawhead 12, comprises a metal bar, whereon the heavy hook 12<sup>a</sup> is formed at the front end.

The hook 12<sup>a</sup> is rearwardly and upwardly projected above a reduced portion of the drawhead body, whereby a receiving notch is afforded immediately rearward of the hook, for the reception of a coupling link.

At a suitable distance from the hook 12<sup>a</sup>, where the body of the drawhead is of greatest thickness, a shoulder 12<sup>b</sup>, is produced by reducing the diameter of the drawhead, the rearward elongation of the reduced body of the part 12, affording a bolt extension 12<sup>c</sup> that

is loosely inserted in a transversely central perforation formed to receive it in the end beam of the car frame.

The part 12<sup>c</sup>, has a washer plate strung upon it that bears upon the rear side of the frame timber 10<sup>a</sup>. The bolt-extension 12<sup>c</sup>, shown broken away in the drawings, in completed form has the buffer spring 13, also shown broken, loosely secured upon it, so that draft force applied to the hook 12<sup>a</sup>, will be cushioned by the spring, and sudden shocks sustained by the drawhead in service, will be absorbed by the spring as usual.

There is an elongated coupling link 14, provided, which is loosely secured by one end in a transverse hole formed to receive it in the thick central portion 12<sup>d</sup> of the drawhead 12<sup>a</sup> that is near to the shoulder 12<sup>b</sup>, so that the main portion of the link will be adapted to rock on the drawhead and project its parallel side members forwardly of the hook end 12<sup>a</sup>, a sufficient degree to permit the front end portion of the link to have a coupled engagement with a drawhead hook 12<sup>a</sup>, on another car coupling of a similar construction.

On the front of the car frame 10, a rock shaft 15, is secured by any preferred means which will permit it to receive a rocking movement, said shaft having a crank handle 15<sup>a</sup>, formed on its outer end, which handle is near the side of the car frame, and therefore in position for convenient and safe manipulation by a person at the side of the car.

The rock shaft 15, has two spaced and parallel limbs 15<sup>b</sup>, projected in the same plane with each other, and having an equal length, which is properly proportioned to the length given the link 14, that said limbs loosely embrace. On the outer ends of the limbs 15<sup>b</sup>, a toe 15<sup>c</sup>, is inwardly turned, and is of a sufficient length to project below and serve as a support for the link 14. On the rock shaft 15, at a point near the crank handle 15<sup>a</sup>, there is a ratchet toothed wheel 15<sup>d</sup>, formed or secured, which wheel is engaged by the hook-like detent dog 15<sup>e</sup>, that is held to vibrate from the upright end of the car, by its pivotal engagement with a bracket box secured on said car, or by any other suitable means.

The construction of parts as shown, indicates two teeth on the wheel 15<sup>d</sup>, but this number may be increased as may be required.

It will be seen that by a proper disposition of parts the link 14, may be maintained in a horizontal plane, or if the teeth on the wheel 15<sup>d</sup>, are of sufficient number, the link may be elevated or lowered and be thus projected forwardly at a correct angle from a horizontal position to have a coupled engagement with another coupling of the same construction, which may be higher or lower than the coupling from which the link is projected.

In operation, two cars on the same track and having the improvement on each, may be automatically coupled by first adjusting one coupling link in a nearly upright position and securing it so adjusted, by the wheel 15<sup>d</sup> and detent dog 15<sup>e</sup>, and the other link projected in a nearly horizontal plane.

The cars if moved toward each other with their couplings adjusted as has been explained, will cause the projected end of the nearly horizontal coupling link to impinge upon the inclined edge of the hook 12<sup>a</sup>, and slide upon it until the link drops off of the high end of the hook limb, into the recess or notch formed for its reception as before explained, which will effect the coupled engagement of the drawheads 12 of both couplings.

The loose embrace of the coupling link 14 by the parallel limbs on the rock shaft 15, prevents an improper lateral displacement of the link, while a limited lateral sliding movement of the shaft will permit a sufficient side play of the link to prevent cramping of the same when cars are running on curves of a railroad.

When two coupled cars are to be detached,

the manipulation of the crank handle on the rock shaft that controls the coupled link, so as to elevate the outer end of said link, will safely and instantly release the coupled drawheads.

It should be understood, that one coupling link of two couplings that are to be connected, is always held in an elevated position unless the mating coupling has its link injured so as to render it unsafe, a reserve link being thus provided in case of accident.

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

In a car coupling, the combination with a car, and a drawhead thereon having an upward and rearward hook formation at its front end, a reduced bolt formation rearward of the hook, and a buffer spring thereon, of an elongated link pivoted transversely by its rear end in the body of the drawhead behind its hook, a transverse rock shaft on the car above the projected end of the drawhead, a crank handle on the outer end of the rock shaft, two spaced limbs on the inner part of the shaft, having inwardly projecting toes that support the link, yet allow the same to swing upward independently of the rock shaft and a ratchet wheel and pawl adapted to lock the shaft and hold the link upright or outwardly projected, substantially as described.

THOMAS SEYFRIED.

Witnesses:

CHAUNCEY G. HELICK,  
THOMAS FEINCLE.