

(No Model.)

B. T. LAWS.  
CAR COUPLING.

No. 446,528.

Patented Feb. 17, 1891.

Fig. 1.

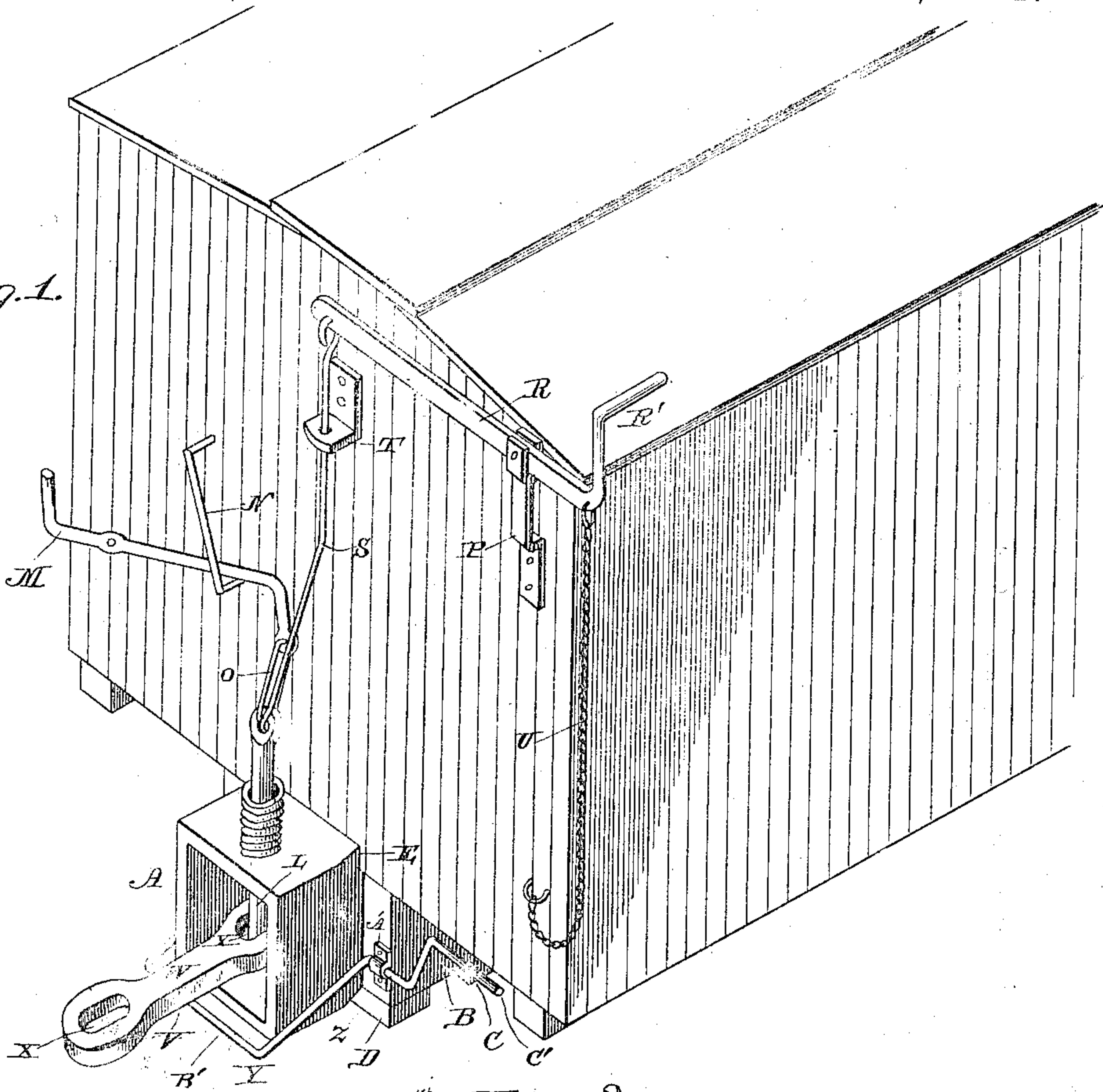
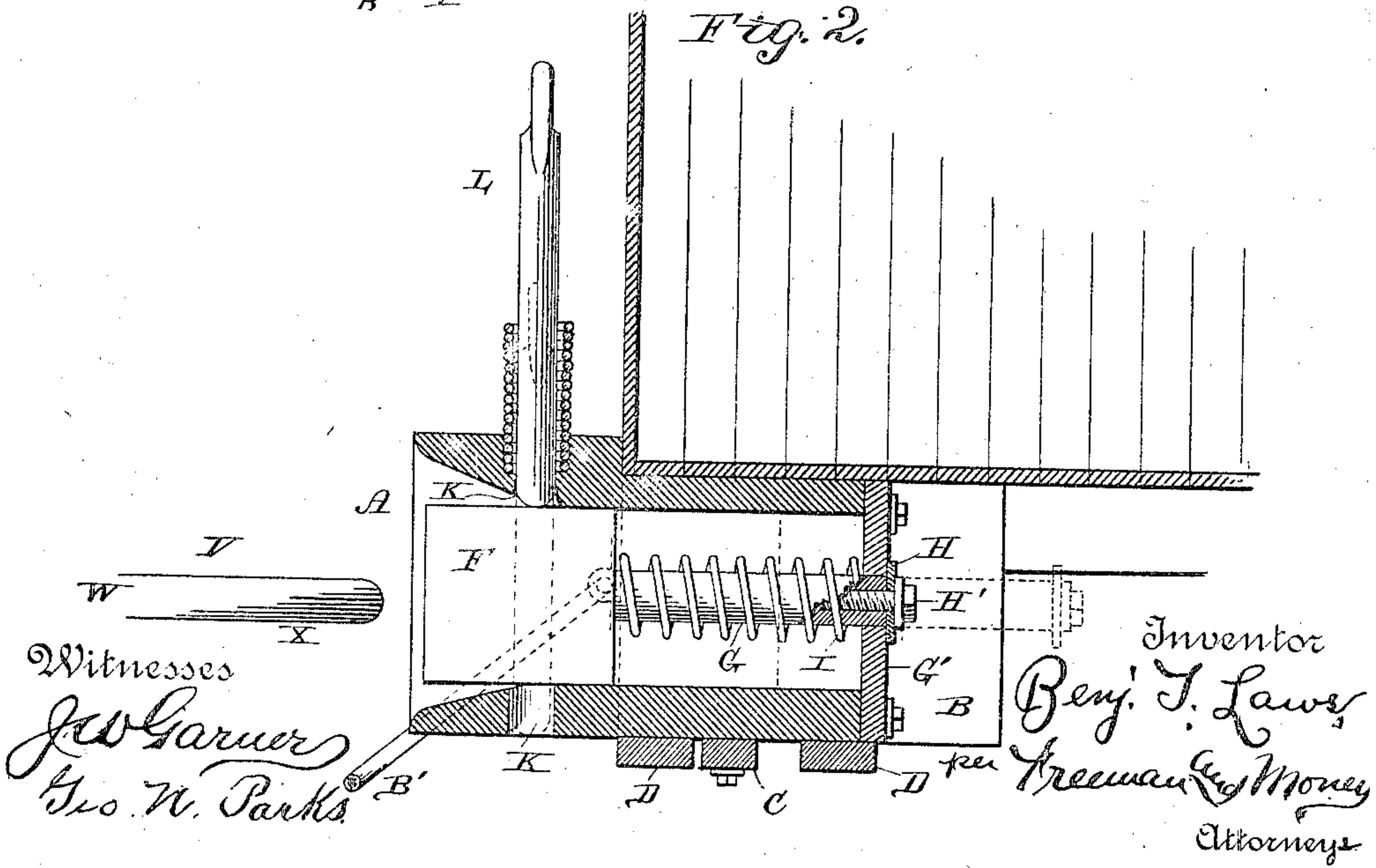


Fig. 2.



Witnesses  
*Geo. Garner*  
*Geo. W. Parks*

Inventor  
*Benj. T. Laws*  
*Freeman & Money*  
Attorneys



# UNITED STATES PATENT OFFICE.

BENJAMIN T. LAWS, OF VAIDEN, MISSISSIPPI, ASSIGNOR OF ONE-HALF TO  
A. B. FULLILOVE, OF SAME PLACE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 446,528, dated February 17, 1891.

Application filed September 23, 1890. Serial No. 365,916. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN T. LAWS, of Vaiden, county of Carroll, State of Mississippi, have invented a new and useful Improvement in Car-Couplings; and I 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 it, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in car-couplings; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the end of a railway-car provided with my improved coupling. Fig. 2 is a longitudinal sectional view of the same.

The draw-head A is arranged between a pair of longitudinal plates B under the bottom of the car, and is permitted a slight longitudinal movement by a transverse depending rib C on its lower side, that plays between the bars D, which connect the lower sides of the plates A. Shoulder E, formed on the upper side of the draw-head, bears against the end of the car and limits the inward movement of the draw-head. Arranged in the draw-head and longitudinally movable therein is a buffer F, having a rearwardly-extending stem G, which passes through an opening in the plate or head G', bolted on the inner end of the draw-head, and the stem has a cap-piece H, secured to its inner end by a bolt H', to prevent the buffer from being withdrawn. A coiled spring I is arranged on the said stem and bears against the head of the buffer and against the inner end of the draw-head, serving thereby to normally move the buffer forward beyond the vertical pin-openings K in the upper and lower sides of the draw-head. When the buffer is in this position, the coupling-pin L is withdrawn from the draw-head and its lower end is supported on the buffer, as shown in Fig. 2.

On the front of the car, near one side thereof, is pivoted a hand-lever M, the inner end of which plays and is confined in a guide-yoke N on the end of the car, and the said

inner end of said hand-lever is connected to the eye of the coupling-pin at the upper end of the latter by a link O. A bracket P is attached to the end of the car near the top thereof, and on the side opposite the hand-lever M, and in the bifurcated upper end of which it is also connected to the eye of the coupling-pin by a rod S. The latter passes through a guide T. The outer end of the hand-lever M projects somewhat beyond one side of the car, and is thereby adapted to be readily grasped by a person stationed on the ground at that side of the car to enable the coupling-pin to be withdrawn from the draw-head for the purpose of uncoupling the cars. The lever R has an arm or pedal R' formed at its outer end and adapted to be pressed by the foot of a person on the top of the car to withdraw the coupling-pin, and a cord or chain U depends from the outer end of the hand-lever R within reach of a person stationed on the ground at that side of the car for the same purpose.

V represents the coupling-link, which is substantially of the shape of the figure 8 and has a long central stem W, and eyes or loops X at its ends to receive the coupling-pins. The stem of the coupling-link plays between the draw-heads on the opposing cars, and, being of reduced width, enables the link to play laterally when the train is passing curves without danger of striking the sides of the draw-heads.

The operation of my invention is as follows: The coupling-link being secured in the draw-head of one of the cars, the pin is raised in the opposing draw-head of the other car in the position shown in dotted lines in Fig. 2, and hereinbefore described, and when the cars come together the free end of the link strikes the buffer and forces it inward against the action of its spring until the openings K are cleared, when the coupling-pin descends by gravity, engages the link, and the cars are coupled. By reason of the springs, which act upon the buffers, the same are kept pressed endwise against the ends of the link, and hence the concussion between the ends of the cars when the train is in motion is deadened, as will be readily understood.

In order to enable the coupling-link to be readily directed into the opposing draw-head



when coupling without the necessity of going between the cars, I provide a lifting-yoke Y, comprising a rock-shaft Z, having its bearings A' on the ends of the plates B, and bent at its center to form a yoke B' and at one end to form a crank C', whereby the lifting-yoke may be operated.

It will be understood from the foregoing that my improved car-coupling is automatic in operation and that its use enables cars to be coupled and uncoupled without risking life and limb by going between the cars.

Having thus described my invention, I claim—

1. The car having the pair of plates B and the cross-bars D, connecting them on their lower sides, in combination with the draw-head having the rib C, arranged between the bars D, and the shoulder E, bearing against the end of the car, the buffer F in the draw-head, having the stem G, a plate G' bolted to

the inner end of the draw-head and forming a guide for them, the caps H, bolted to the inner end of the latter, the buffer-spring I on the said stem, the coupling-link, and the pin, substantially as described.

2. The car having the draw-head, the coupling-pin, the levers M and R, pivoted near opposite sides of the car, said lever R being near the top of the car and having the pedal R' at its lower end, the chain U, attached to said lever for the purpose set forth, and the link O and rod S, connecting the levers M R to the coupling-pin, respectively, all arranged and adapted to operate substantially as described.

In testimony that I claim the foregoing I append my signature.

B. T. LAWS.

Witnesses:

J. P. NABORS,

JAMES SOMERVILLE.