

(No Model.)

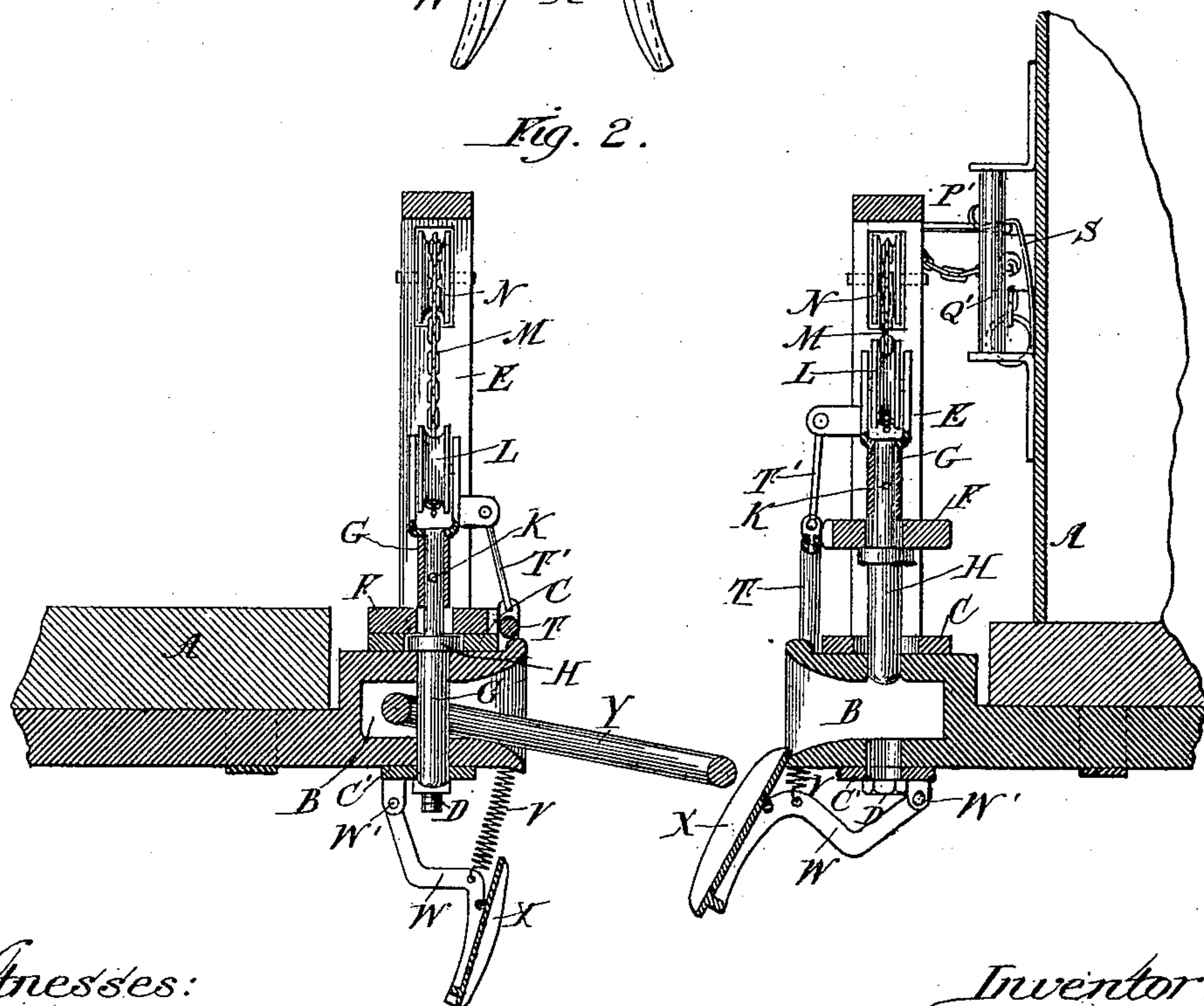
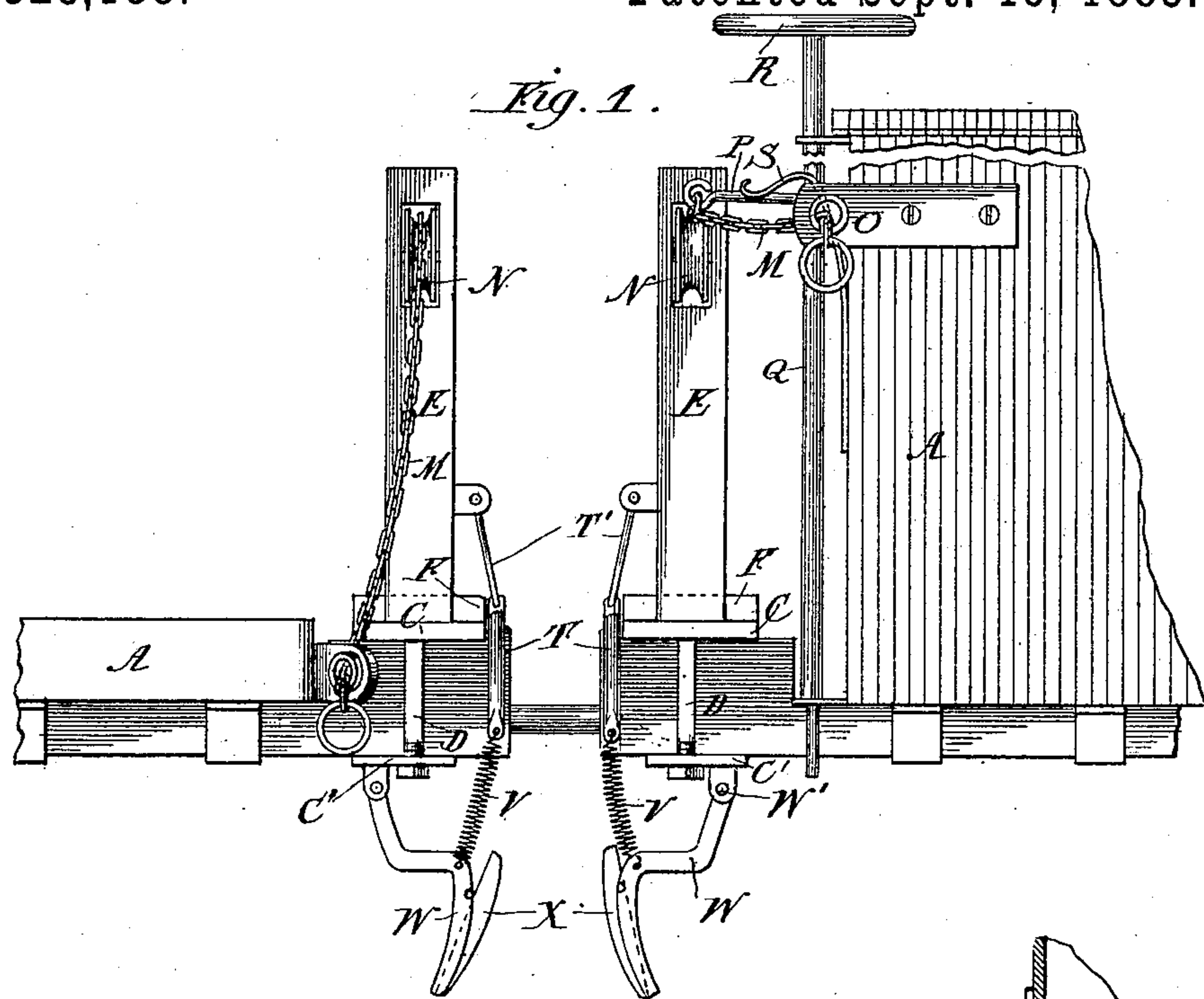
2 Sheets—Sheet 1.

J. G. WILLIAMS.

CAR COUPLING.

No. 326,188.

Patented Sept. 15, 1885.



Witnesses:

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Inventor:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3 Patented Sept. 15, 1885.

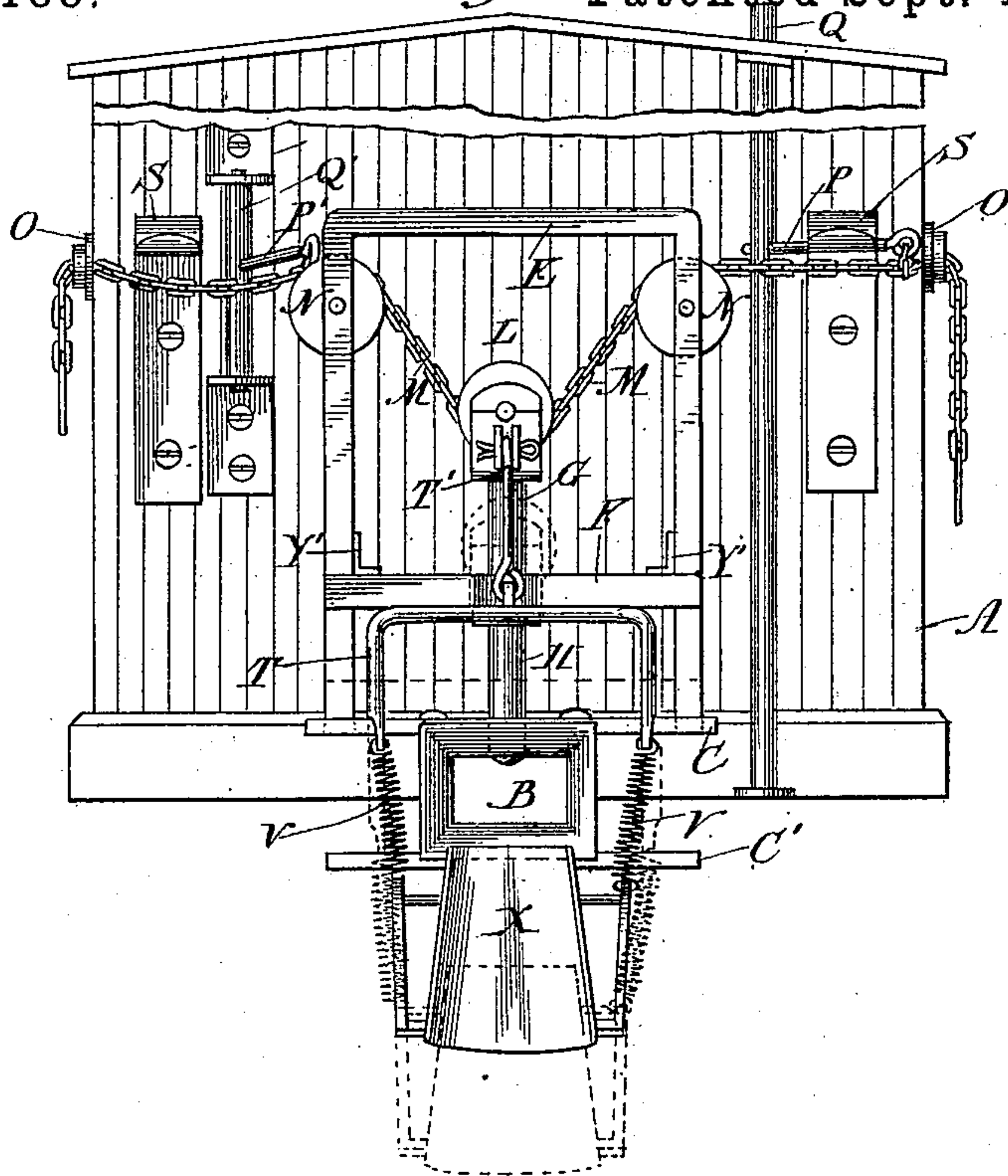


Fig. 4.

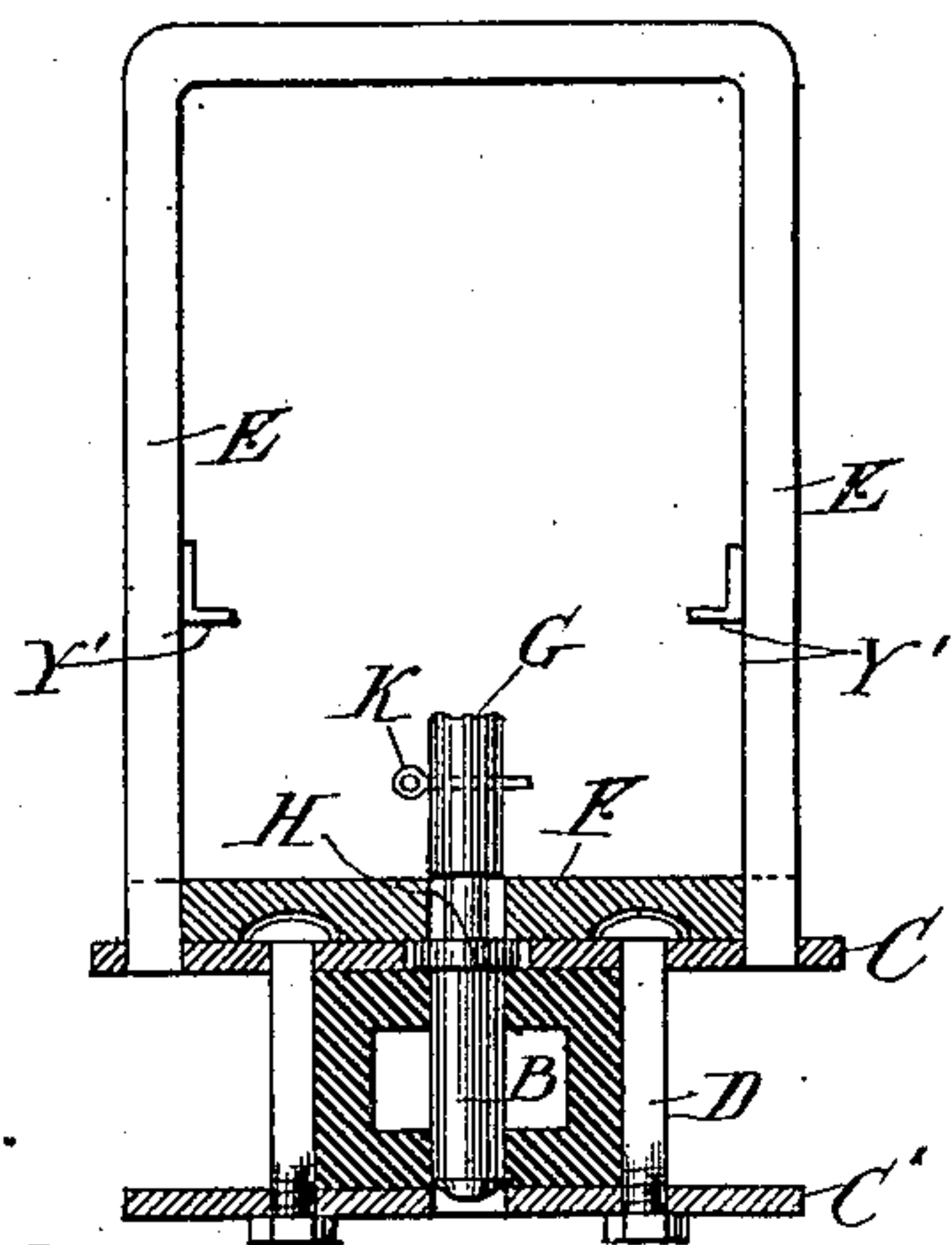
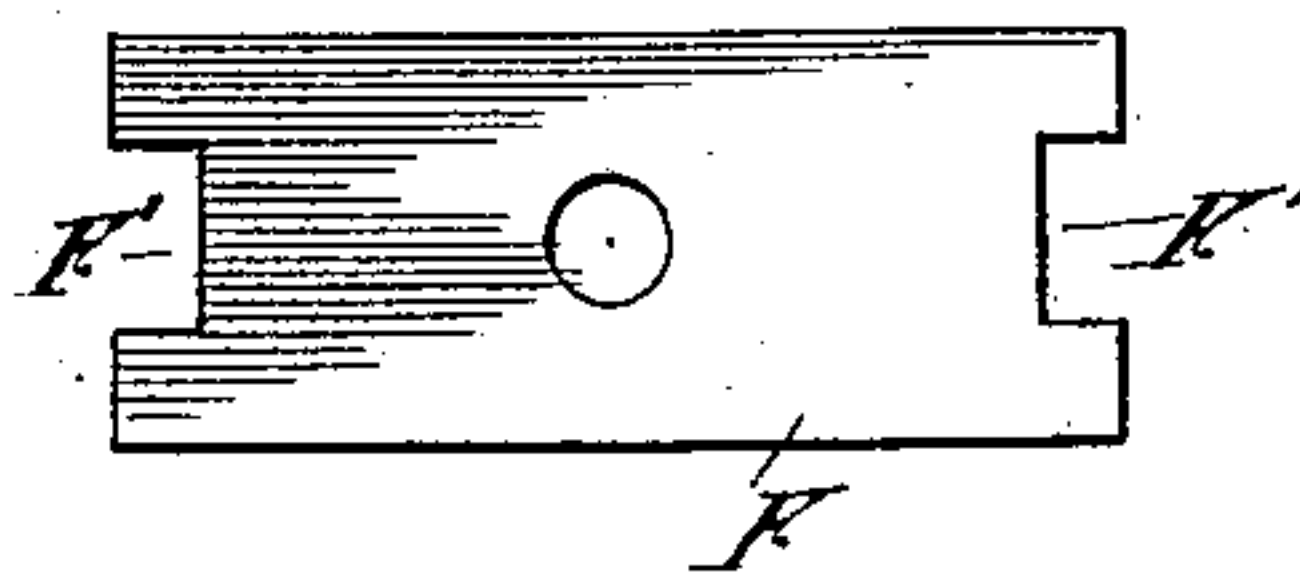


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN G. WILLIAMS, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO
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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 326,188, dated September 15, 1885.

Application filed June 8, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. WILLIAMS, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Automatic Car-Couplings, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improved car-coupler.

The object of the invention is to obtain a coupler which will act automatically to couple the cars, and which can be uncoupled without the necessity of the operator entering between the cars, the parts being simple and durable.

To the accomplishment of the above the invention consists of certain novel devices and combination of devices, as will be described and claimed.

Reference will be made to the accompanying drawings, in which Figure 1 is a side elevation of a box-car and a flat car coupled, the two being broken away; Fig. 2, a sectional view of the parts shown in Fig. 1; Fig. 3, a front elevation of a box-car with the invention applied, and Figs. 4 and 5 details of parts.

Like letters refer to like parts in each view.

One design I have in view in the construction of my coupler is to so arrange it as to adapt it to the draw-heads now in use, and I have illustrated it in this way.

In the drawings, A represents a box-car, and B the draw-head thereof, such draw-head extending a short distance beyond the end of the car.

C C' are two plates, the length of which is slightly greater than the width of the draw-head. These plates—one above and the other below the draw-head—are held in place by suitable bolts, D, as clearly shown.

Mounted upon the plate C is a suitable frame, E, the uprights of which are situated one at each end of said plate.

F represents a movable plate, which, as clearly shown in Fig. 5, is provided upon each end with a notch, F', into which the uprights of frame E fit, a guide for such plate being thus provided.

The plate C, hereinbefore referred to, is provided with a central opening for the passage

of the coupling-pin G. Plate F is also provided with a suitable opening for a similar purpose.

At the point shown in Fig. 4 coupling-pin G is formed with a collar or flange, H, which abuts against the under face of plate F. After the pin has been passed through plate F from beneath, a pin, K, is passed through it, and it is held in place in plate F and adapted to be moved therewith.

Secured to the upper end of the coupling-pin is a suitable bracket, in which a pulley, L, is mounted.

A chain, M, is passed under pulley L, and then over pulleys N, one mounted in each upright of frame E, and thence through eyes formed in strips O, secured to the car, the chains being prevented from escaping by suitable rings with which they are provided, and by which they may be operated.

Attached to chain M, upon one side of the car, is an arm, P, which is also secured to a vertical shaft, Q, this latter having suitable bearings in the car and provided on its upper end with an ordinary brake-wheel, R.

Upon the opposite side a short shaft, Q', is provided, to which an arm, P', is attached, such arm being also attached to the chain M upon that side.

There is a spring-catch, S, secured to the car upon each side, there being one for each arm P P'.

The operation of the parts as thus far described is as follows: If the chain M is pulled from either end, the coupling-pin is elevated and either arm P or P' forced into contact with its spring-catch, whereby the coupling-pin is held in an elevated position; or, if it is desired to operate the parts from the top instead of the side of the car, the shaft Q is operated and the same result accomplished.

T represents a bent rod, which is connected with the top of the coupling-pin through the medium of a link, T'. As shown clearly in Fig. 3, rod T is bent at each end, and to each of such bent ends there is secured one end of a coiled spring, V. Springs V are secured at their lower ends each to a bent arm, W, which are pivoted to the under side of plate C', as at W'. The arms W carry at their front end a plate, X, to be referred to.

As the operation hereinbefore described for raising the coupling-pin is being carried on, the bent rod T is drawn up by the pin and the arms W forced to describe the arc of a circle, 5 whereby the plate X is carried to the position shown in connection with the box-car in Fig. 2 and in full lines in Fig. 3, thus forming a downwardly-inclined continuation of the draw-head. The parts being in this position, the 10 car to be coupled is advanced, the coupling-link Y contacting with plate X, and being forced upon the incline formed thereby into the draw-head. As the cars are brought still closer together the plate X of the other car 15 will contact with the plate above referred to and force it back to its original position. By this action the coupling-pin is drawn down and the parts which held it in position released. 20 The parts are so arranged that the coupling-pin will not be drawn down until the link has entered the draw-head sufficiently far to insure the coupling of the cars.

Y' in Figs. 3 and 4 represents suitable stops secured to the uprights of frame E to limit the movement of plate F.

What I claim is—

1. The combination, with the draw-head B, the coupling-pin G, and mechanism for raising such pin, of link T', bent arm T, springs V, arms W, and plates X, as set forth.

2. The combination, with coupling-pin G, chain M, and suitable pulleys for such chain, of arm P, shaft Q or Q', and spring-catch S, as set forth.

3. The combination, with plate F, coupling-pin G, mounted therein, chain M, and suitable pulleys for such chain, of arms P P', shafts Q Q', and spring-catch S, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN G. WILLIAMS.

Witnesses:

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