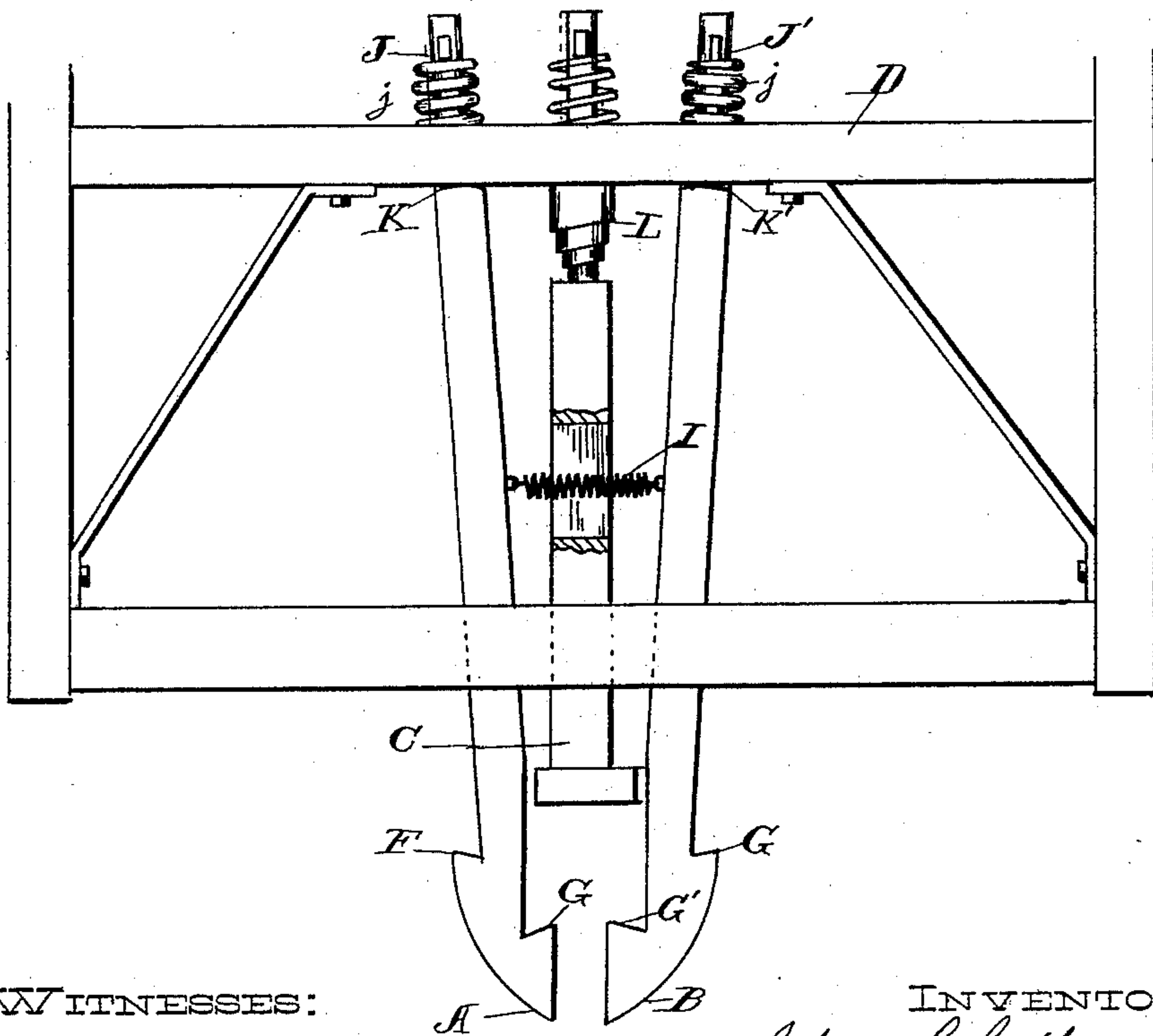
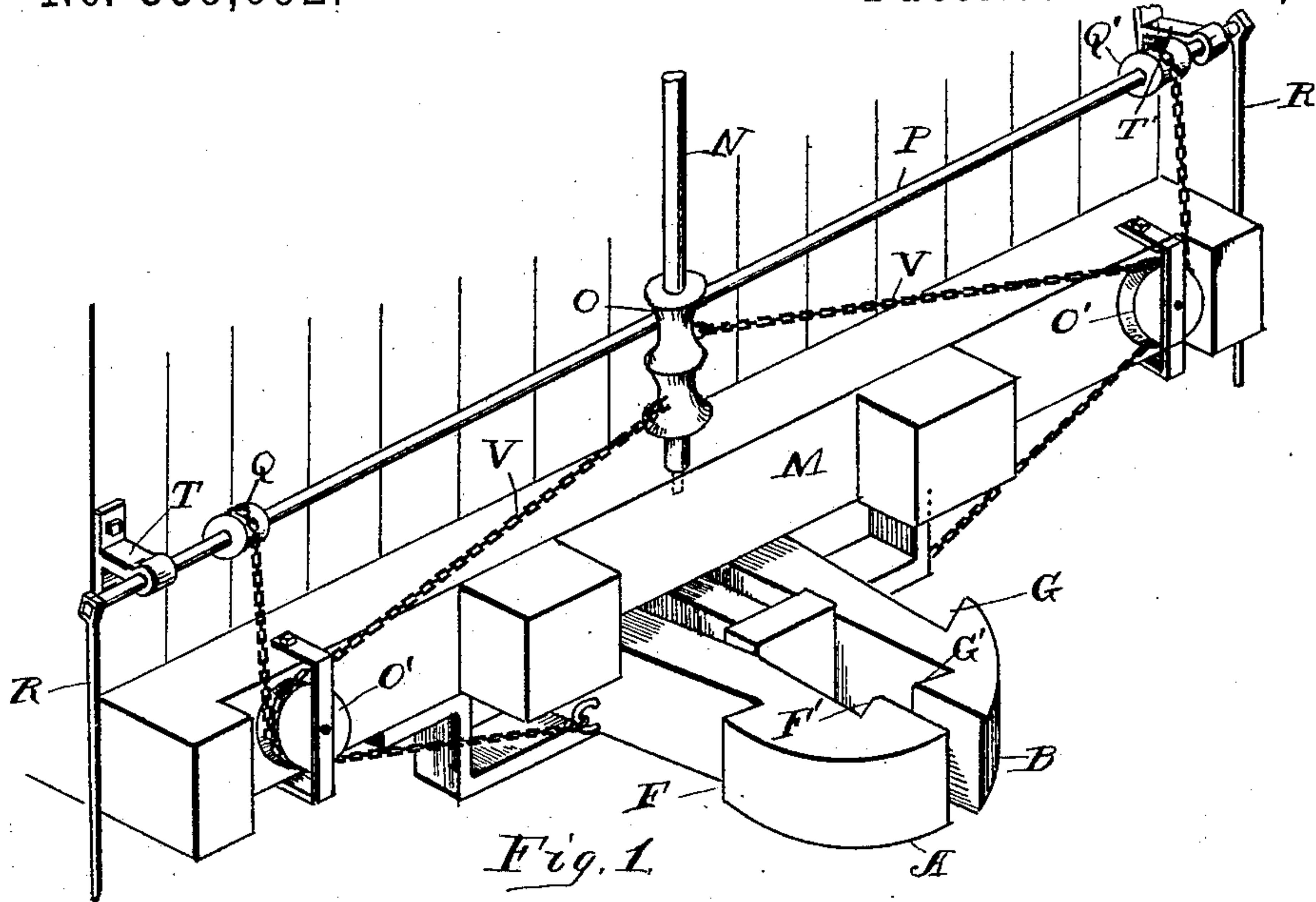


(No Model.)

A. S. NEAL.
CAR COUPLING.

No. 359,092.

Patented Mar. 8, 1887.



WITNESSES:

Robert Kirk.
Jacob Forlow

INVENTOR:

Adam Lybester Neal

By

[Signature]

Attorney.

UNITED STATES PATENT OFFICE.

ADAM SYLVESTER NEAL, OF RICHMOND, TEXAS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 359,092, dated March 8, 1887.

Application filed September 1, 1886. Serial No. 312,373. (No model.)

To all whom it may concern:

Be it known that I, ADAM SYLVESTER NEAL, of Richmond, in the county of Fort Bend and State of Texas, have invented a new and useful Improvement in Car-Couplers, which improvement is fully set forth in the following specification and accompanying drawings.

The special objects of this invention are to provide an automatic device for coupling cars, which will allow for the different height of cars when loaded and empty, and to so construct the parts that they can be operated from the tops and sides of the cars by suitable means, so that the operator is out of danger of being injured; also, to arrange the prehensile parts in such a manner that it will couple automatically when the cars are run together.

In the drawings, Figure 1 is a perspective view of part of the end of a freight-car, together with my improvement. Fig. 2 is a top view of the frame to which the principal parts of the coupling are attached.

A and B are heavy jaws of wrought metal, each having two hooks, F F' and G G', formed on the outside and inside of the end, as shown by the drawings. These jaws are attached to the beam D in such a manner that they can have motion laterally, and are held together by a spiral or other spring, I, attached at or near the middle of their length, as shown in Fig. 2. At the ends J J', which project beyond the beam D, are spiral springs j, for the purpose of taking up all longitudinal motion and hold them tight against the shoulders, which are provided at K K'. A buffer, C, located between the jaws, is also attached to the beam D, and is provided with the usual spring, L.

The apparatus for operating the jaws A and B is shown in Fig. 1. Near the center of the timber M is journaled a perpendicular shaft, N, which extends to the top of the car, and is provided with a wheel (not shown) for operating it. To this shaft, or a suitable enlargement, O, of it, are attached chains V, which move laterally to and around the grooved pulleys O' O', near the corners of the car, thence to the jaws A and B, to which they are attached. The transverse shaft P is attached to the car by suitable

bearings at T T', and it is provided with levers R R at the ends, which can be operated at the side. To the rollers Q Q' are attached chains which pass up around the grooved pulleys O' O', thence down to the jaws A B.

The levers at the side of the car are for operating the jaws A B from the ground. The chains, which are attached to the shaft P, are arranged so as to wind on the pulley or unwind by shortening or lengthening the chains by a right or left movement of the levers R. The chains, being attached to the jaws A B, will cause an outward lateral movement whenever the chains are shortened, and an inward movement by the action of the spring I whenever the chains are lengthened. The perpendicular shaft, being connected to the jaws in a similar manner, will cause a similar movement of the jaws whenever it is rotated by the wheel at the top of the car.

This coupling is operated by partially opening the jaws A B by means of the levers at the side of the wheel at the top of the car, so that the closed jaws of the car with which it comes in collision will, on account of the beveled front ends, insinuate themselves between the opened jaws, and pass in far enough for the outer jaws to close laterally, engaging the hooks, and thus couple automatically, as shown in Fig. 2. It will be seen that the cars can be uncoupled whenever desired by a movement of the side levers, or by means of the rotation of the perpendicular shaft N at the top of the car.

What I claim as my invention is—

1. In a car-coupler, the jaws A and B, each having two side hooks, F G, combined with the bar D, and springs j and F' G', when arranged to operate laterally and simultaneously for the purpose of coupling and uncoupling cars, substantially as described.

2. In combination with the jaws A and B, which are arranged to move laterally and simultaneously, the levers R R', shaft P, pulleys O' O', and the chains which pass over the pulleys O' O' and connect the rollers Q Q' with the jaws A B, when used for the purpose substantially as herein described and set forth.

3. In combination with the jaws A B, the

beam D, and springs j, the buffer C, located between the jaws and provided with the spring L, substantially as described.

4. In combination with the jaws having 5 hooks on the inside and outside, and having springs on their ends and connected together by a spring, a buffer located between said jaws, provided with a spring, all substantially as shown and described.

In testimony that I claim the foregoing I do have hereunto set my hand, this 18th day of May, 1886, in the presence of witnesses.

ADAM SYLVESTER NEAL.

Witnesses:

J. J. CHENEY,
J. J. CAIN.