

(No Model.)

H. A. BARNARD.

CAR COUPLING.

No. 353,773.

Patented Dec. 7, 1886.

Fig. 1.

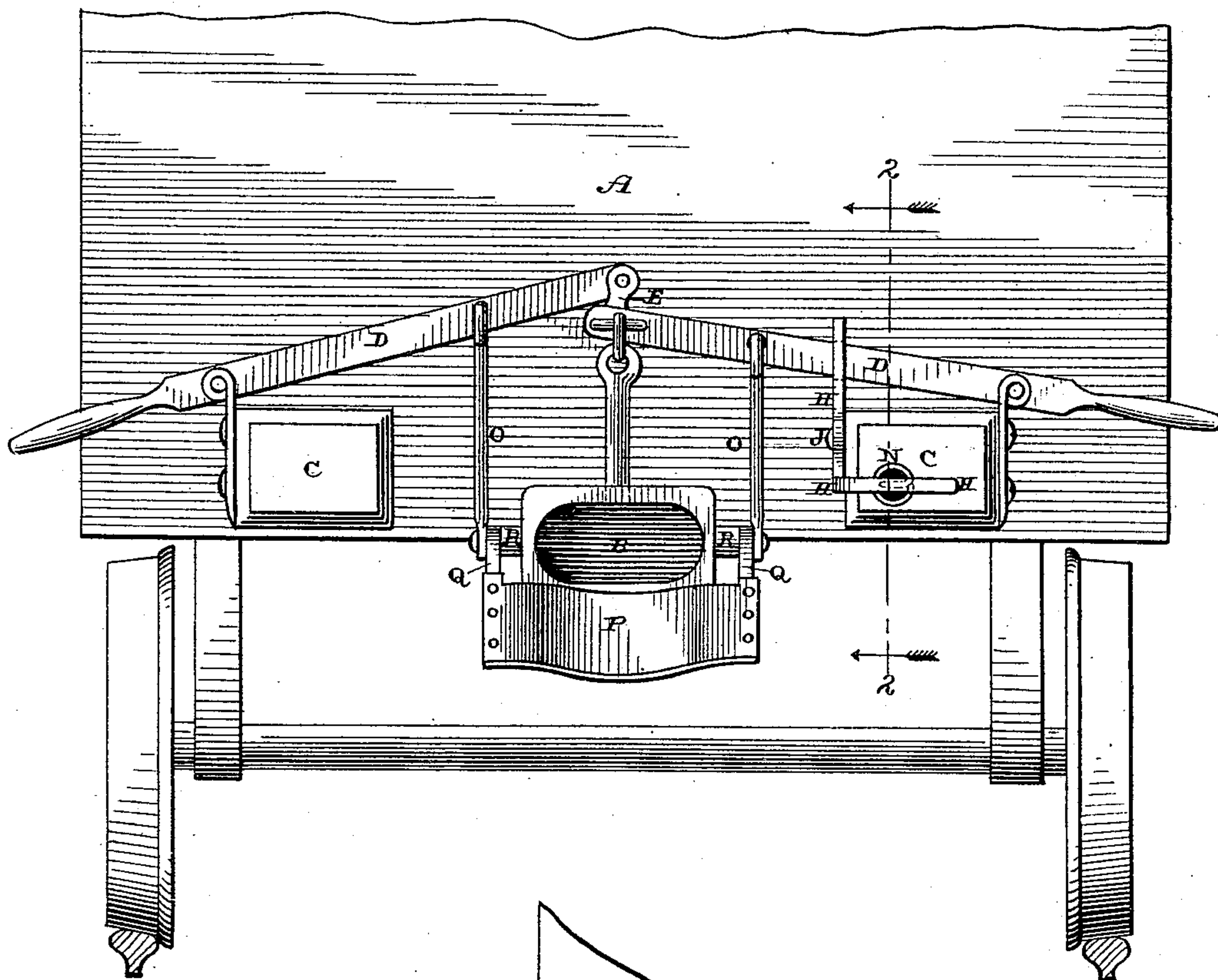
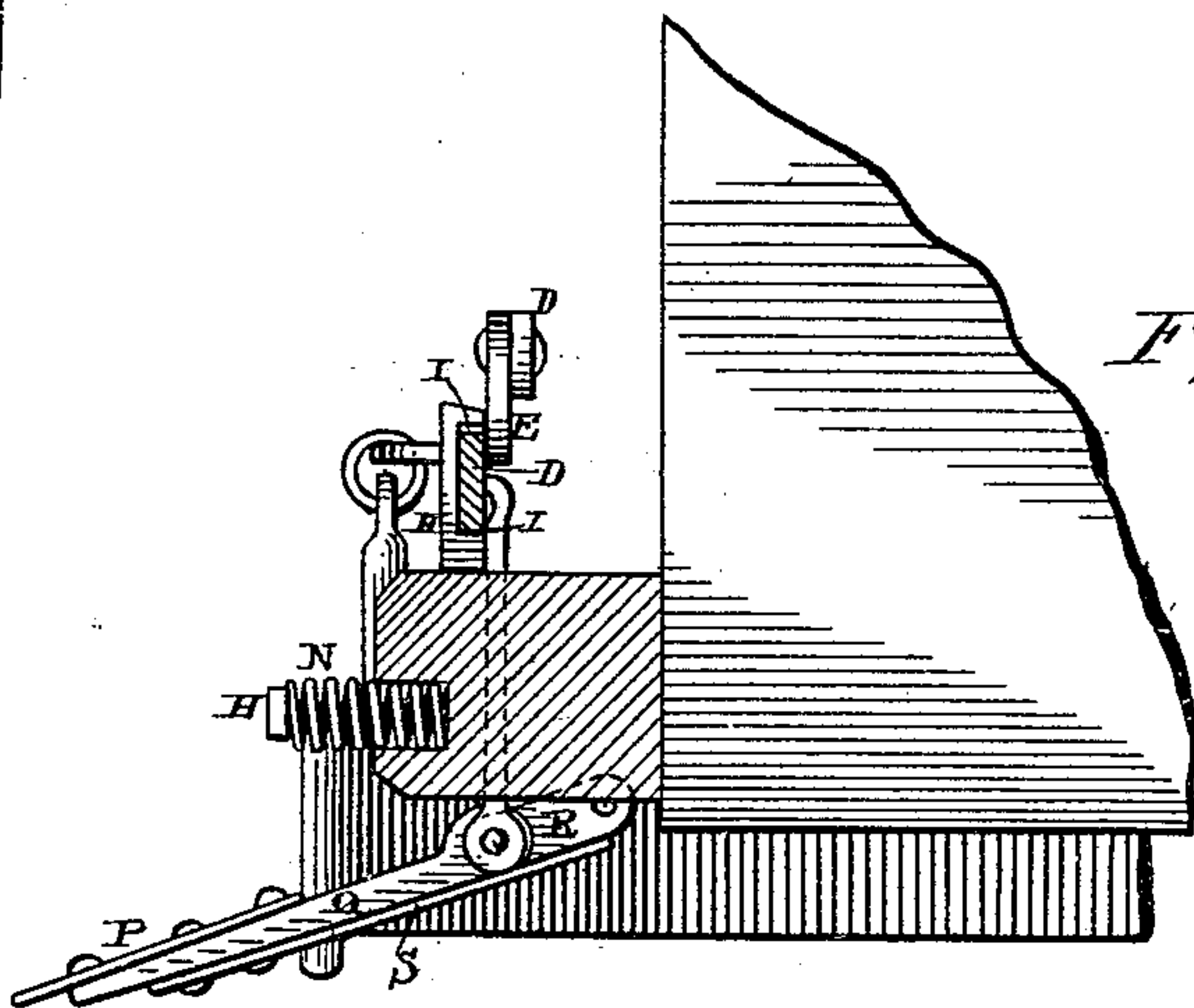


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY A. BARNARD, OF PLATTSBURG, NEW YORK, ASSIGNOR OF ONE-HALF TO SAMUEL L. WHEELER, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 353,773, dated December 7, 1886.

Application filed September 25, 1886. Serial No. 214,511. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. BARNARD, a citizen of the United States, residing at Plattsburg, in the county of Clinton and State of New York, have invented certain new and useful Improvements in Automatic Car-Couplers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in car-couplings; and it consists in, first, the combination of the draw-head, two levers, which are pivoted upon the timbers or platform at the end of the car, and which are loosely connected together at their inner ends, the coupling-pin, which is attached to the inner ends of these levers, the guide, connecting-rods, which connect the guide with the levers, and the springs, which are secured to the guide, and which support it in position while holding the link, but which will allow it to give when the cars run together; second, the combination of the levers, the coupling-pin connected to their inner ends, the draw-head, and the notched lever, which is pivoted upon the timbers or platform of the car, and which is made to support the levers in a raised position until the cars run together, all of which will be more fully described hereinafter.

The object of my invention is to provide a car-coupling in which the pin will be automatically held in a raised position until the cars run together, when it is tripped and dropped, so as to couple the cars together, and in which a guide is held supported just below the draw-head, so as to guide the approaching link into the draw-head, and which guide will automatically give before the approaching car, so as not to be injured when the cars run together.

Figure 1 is a front elevation of a car-coupling embodying my invention. Fig. 2 is a vertical section taken on the dotted line 2 2 of Fig. 1.

A represents a car of any suitable construction, and B the draw-head. Pivoted upon the timbers C, or the platform of the car, are the two levers D, which have their outer ends to project out to or slightly beyond the sides of

the car, so that the brakeman can readily operate them without having to go between the cars and thus endanger life and limb in coupling the cars together. The inner ends of these two levers are connected together by the link E, which allows the levers A free up and down movement at their inner ends for the purpose of raising the coupling-pin from the draw-head, and dropping down therein, according as the cars are to be coupled or uncoupled. When the outer end of either one of the levers is forced downward by the brakeman, the coupling-pin is raised up into the position shown in Fig. 1, ready for coupling when the cars run together. In order to hold this pin in a raised position there is pivoted upon one of the timbers or the platform of the car a bent lever, H, which has a notch, I, made in its upper end, so as to catch over the outer side and opposite edges of one of the levers, as shown in Fig. 2, and thus support the levers and the pin without being held by the brakeman. This lever is pivoted at the point J, and has its lower end bent around the timber so as to project horizontally a slight distance in advance of the draw-head, as shown in Fig. 2, so that when the cars run together this horizontal lower end of the lever will be struck, and thus the lever made to turn upon its pivot so as to throw its upper end backward, and thus release the levers and pin, when they fall from their own gravity, and the pin then passes through the link and draw-head, so as to couple the cars together. For the purpose of causing this bent lever to be always forced forward at its upper end, and thus automatically snap over the operating-lever when the operating-lever is raised upward so as to set the pin, a spring, N, is applied to the lever for the purpose of making it automatic in its operation.

As here shown, a spiral spring is placed in the timber, and bearing against the inner side of the lower end of the lever; but any kind of a spring can be applied in any desired manner, so that the lever will be forced backward at its upward end, and it will answer equally as well. I do not limit myself in regard to the application of this spring, its form, or con-

struction, for this may be varied at will without departing from the spirit of my invention: If at any time the pin is to be dropped downward without the cars running together, it will
5 be necessary for the brakeman to press against the lower end of this lever and force it forward, so as to release the operating-lever which supports the pin.

Supported from the two operating-levers by
10 the two connecting-rods O is the guide P, which projects upward at a suitable angle in advance of the draw-head, while the coupling-pin is raised upward for the purpose of guiding the advancing link directly into the mouth
15 of the draw-head. When the pin drops this guide also drops and hangs vertically down under the draw-head so as to be entirely out of the way. The guide is rigidly secured at each end to the rods Q, which are pivoted at
20 their inner ends to the shorter rods, R, which are pivoted upon the side of the draw-head. To the under side of the rods Q are rigidly secured the springs S, which serve to hold the rods Q R in a line with each other, as shown
25 in Fig. 2, so as to cause them to move together. Should at any time the cars strike against the guide it will be forced backward and downward by the bending of the springs, so as to move just far enough back to be out of danger.
30 When the cars then strike and the coupling-pin falls, the guide drops down vertically under the draw-head. Were it not for the jointed rods Q R and the spring this guide would be broken or injured by the running of

the cars together, and hence would be little or
35 no good. The springs allow the guide to give sufficiently before the cars, to prevent injury under any and all circumstances.

It will be seen that when the coupling-pin is raised upward ready to be coupled the guide
40 is also raised upward and catches the end of the link, if its outer end has dropped down below the coupling, and guides it directly into the draw-head with which it is to couple. The pin and the guide move together at all times.
45

Having thus described my invention, I claim—

1. The combination of the draw-head, the operating-levers, and the pin with the connecting-rods, the guide, the jointed rods Q R,
50 which support the guide, and the springs which are applied to their under sides, substantially as set forth.

2. The combination of the timbers C, the spring N, the bent bar, rod, or lever H, which
55 is pivoted upon the timbers and projects in front of and above the same, and which is provided with a notch at its upper end, with the lever D, which catches in the notch in the upper end of the rod or lever H, the pin, and
60 the head, substantially as set forth.

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

HENRY A. BARNARD.

Witnesses:

CHARLES E. ALLEN,
WILL J. MURPHY.