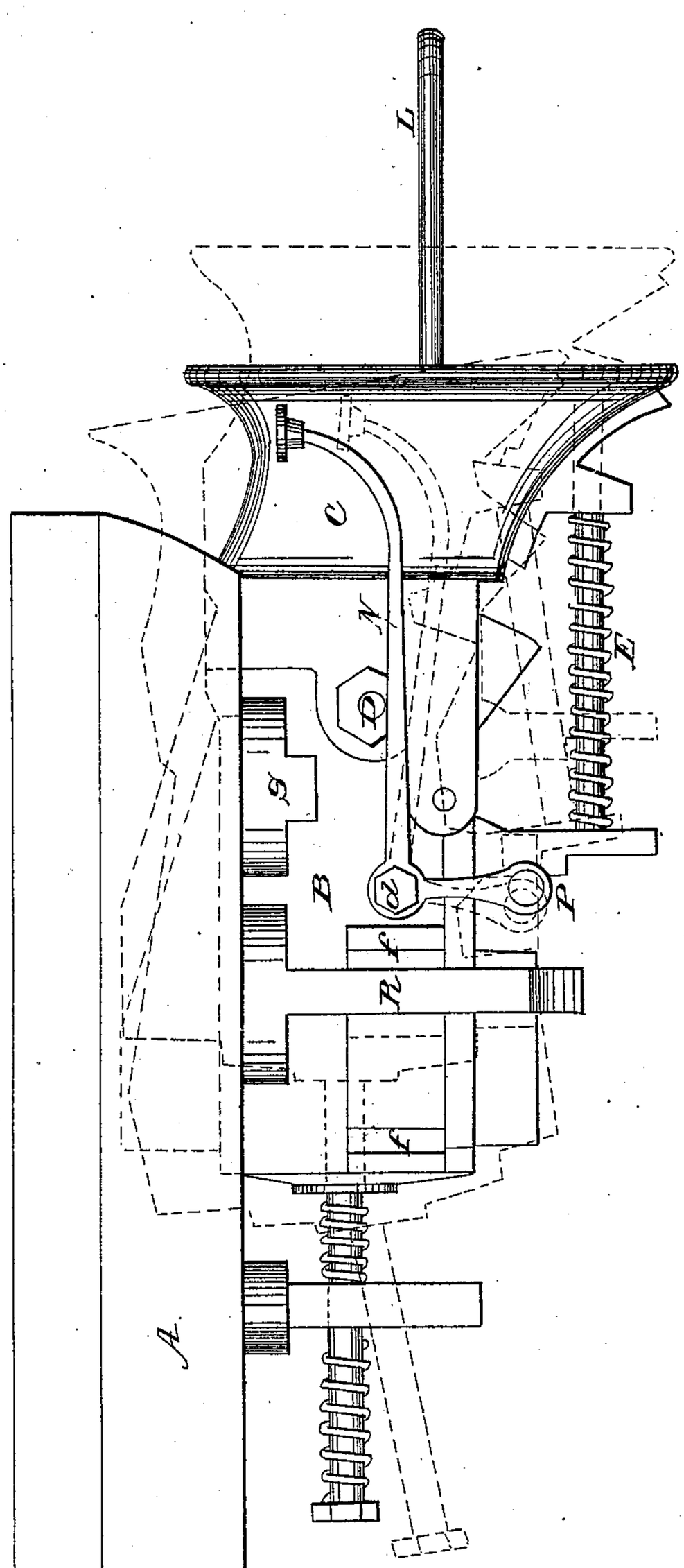
3 Sheets—Sheet 1.

J. H. J. O'NEILL.

Car Coupling.

No. 64,898. Patented May 21, 1867.

Fig. 2.



Witnesses

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3 Sheets—Sheet 2.

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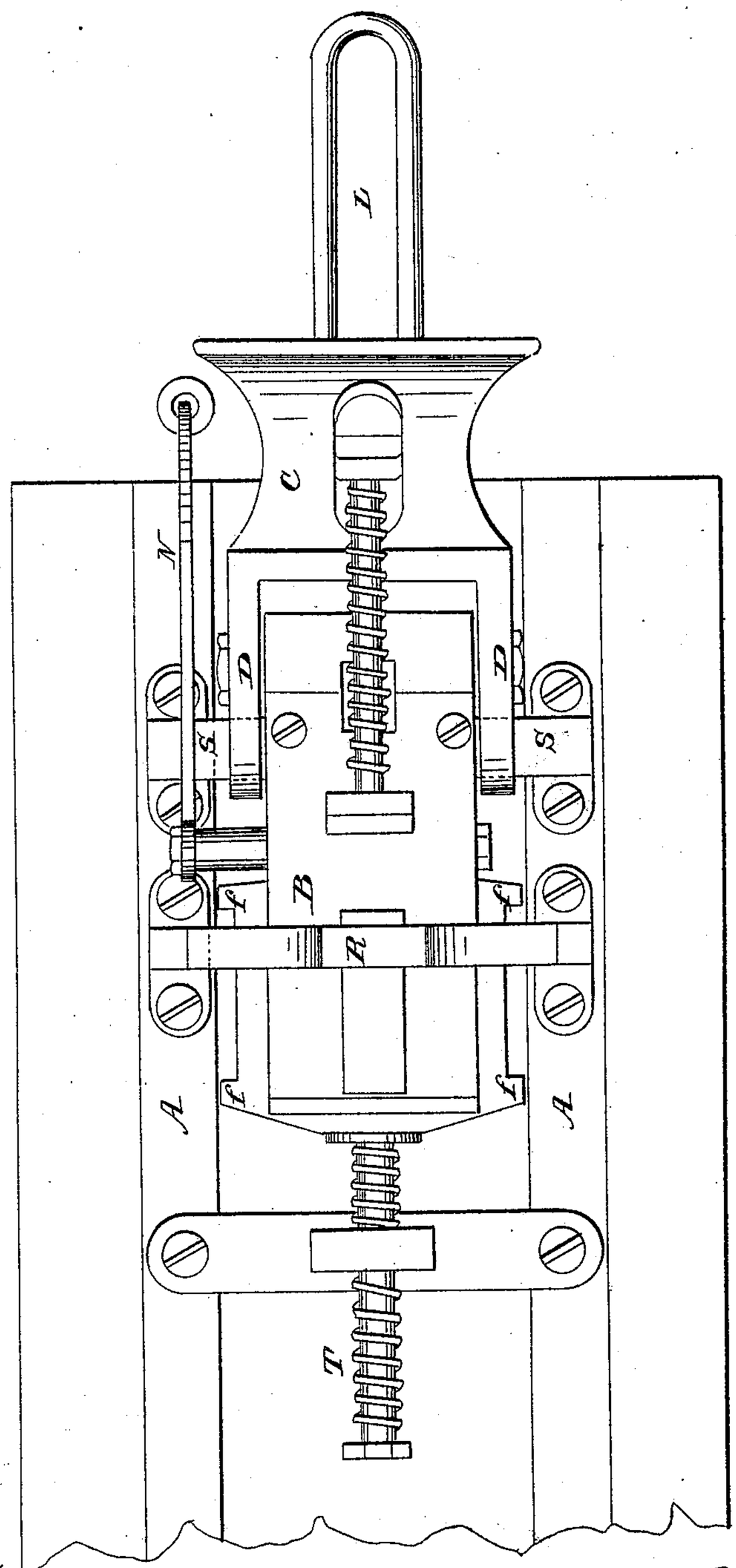

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Witnesses

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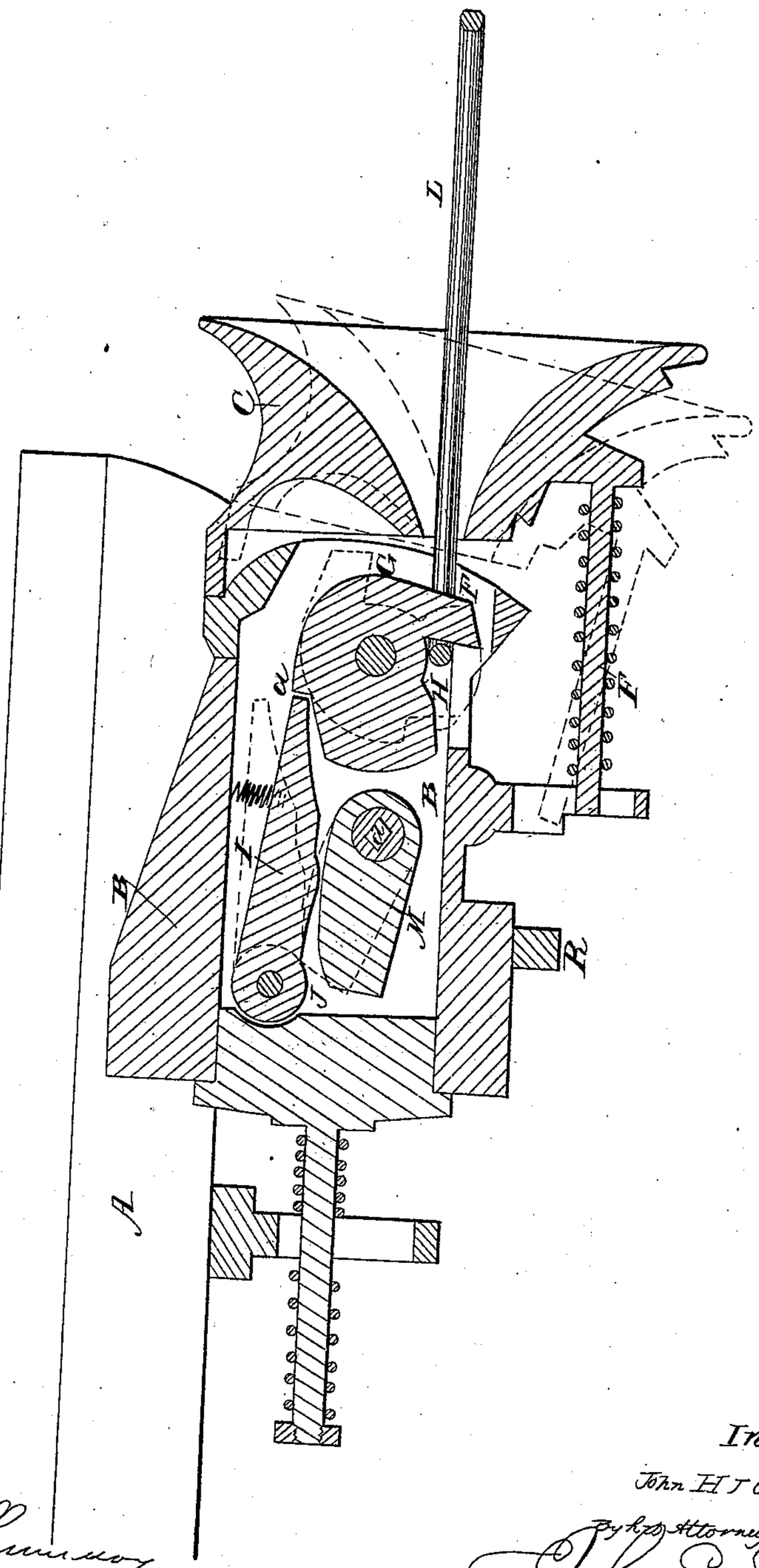

Fig. 3.

Witnesses.

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JOHN H. J. O'NEILL, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 64,898, *dated May* 21, 1867.

IMPROVED CAR-COUPLING.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN H. J. O'NEILL, of New Haven, in the county of New Haven, and State of Connecticut, have invented a new improvement in Car-Coupling; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view.

Figure 2, a view from the under side looking up; and in

Figure 3 a longitudinal vertical section.

This invention relates to an improvement in self-acting apparatus for coupling cars, and consists, first, in the peculiar construction of the coupling, whereby it is made self-acting; and, second, in the peculiar attachment of the coupling to the car.

To enable others skilled in the art to construct and use my improvement, I will proceed to describe the same as illustrated in the accompanying drawings.

A is the framework beneath the car, to which the coupling is attached. B is a metal case, which contains the operative parts of the coupling. C is the head, pivoted to the case B at D, so as to be turned down from the position denoted in black to that denoted in red, fig. 3, and forced back and retained in the first position by a spring, E, or its equivalent This swinging movement is to facilitate the working of the coupling, as more fully hereafter described. F (see fig. 3) is a hook within the case, hung upon a pivot, G, and weighted by an increase of metal upon the side H, so that when free the weighted part H will turn the hook to the position denoted in blue, fig. 3. I is a pawl, pivoted at J within the case, so as to fall on to a notch, *a*, on the hook and hold the hook firmly when turned to the position denoted in black. L is the link, shown in fig. 3, as inserted and locked by the hook F. To release the link, a lever, M, is pivoted at *d* below the pawl I, and is turned up by means of a lever, N, (see fig. 1,) attached to the lever M, so that when the lever N is depressed, as denoted in dotted lines, fig. 1, the lever M will be raised, as denoted in red, fig. 3, and in so turning will raise the pawl I from the hook, which will then, as before described, quickly turn up to the position denoted in blue, and permit the withdrawal of the link; and when again the link is inserted, it will strike the weighted side of the hook and turn up the weight and down the hook, until the pawl I falls again into the notch *a*. The lever N is arranged so that by placing the foot upon the end of the lever, the link may be released and the cars uncoupled, or from an arm, P, of the same lever an attachment may extend from one car to another, or to the locomotive, so that any or all the cars may be uncoupled instantly.

By the depressing of the head C a low car may be readily attached to the coupling of a higher, or *vice versa*, as the link advancing strikes upon the lower cheek of the head it depresses it until it be so far inclined that the link freely enters to be hooked, and the said head also yields to different inclinations of the motion of the car while running. The case B rests upon a yoke, R, so that it may be raised and turned up thereon, as to the position in blue, denoted in fig. 1, while lugs S upon the framework of the car support the case and prevent its falling below a certain point; thus a free up-and-down movement is permitted, the coupling affording a great range for adjustment. To the rear of the case is attached a spring, T, or equivalent therefor, double acting, so as to offer resistance to either the bump or draw upon the coupling, and upon each side of the case are arranged projecting lugs, *f*, so that when the coupling is drawn forward sufficiently to overcome the resistance of the spring, as denoted in red, fig. 1, the rear lug will bear against the yoke R, or other point, and thus, instead of making the whole strain in drawing the car upon the spring, the solid bearing is attained. The other or forward lug operates in like manner upon a reverse movement. The spring or resistance should be so strong as to nearly move the car before the lug strikes the yoke, and yet the full tension of the spring should not be taken. By this arrangement the spring could never "set." It may be advisable to place a spring above the pawl I in order to insure its remaining upon the hook while the car is moving, and I prefer to place a spring in that position and for this purpose. I prefer the arrangement of the lever M to operate the pawl I, as I have described, yet this same object may be attained by moving the pawl I directly from its own bearing by the outside connection.

I do not broadly claim a swinging or oscillating hook, arranged so as to catch and hold the link, as such is not new.

Having, therefore, thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is—

1. The combination of the hook F, the pawl I, and lever N, when constructed and arranged so as to operate substantially in the manner herein set forth.

2. The head C, constructed so as to be depressed independent of the case B, substantially as set forth.

3. The arrangement of the lugs *f*, in combination with the frame R, operating so as to relieve the spring, substantially as herein set forth.

J. H. J. O'NEILL.

Witnesses:
JOHN E. EARLE,
A. J. TIBBITS.