(No Model.)

J. O'BRIEN.

CAR COUPLING.

No. 320,955. Patented June 30, 1885.

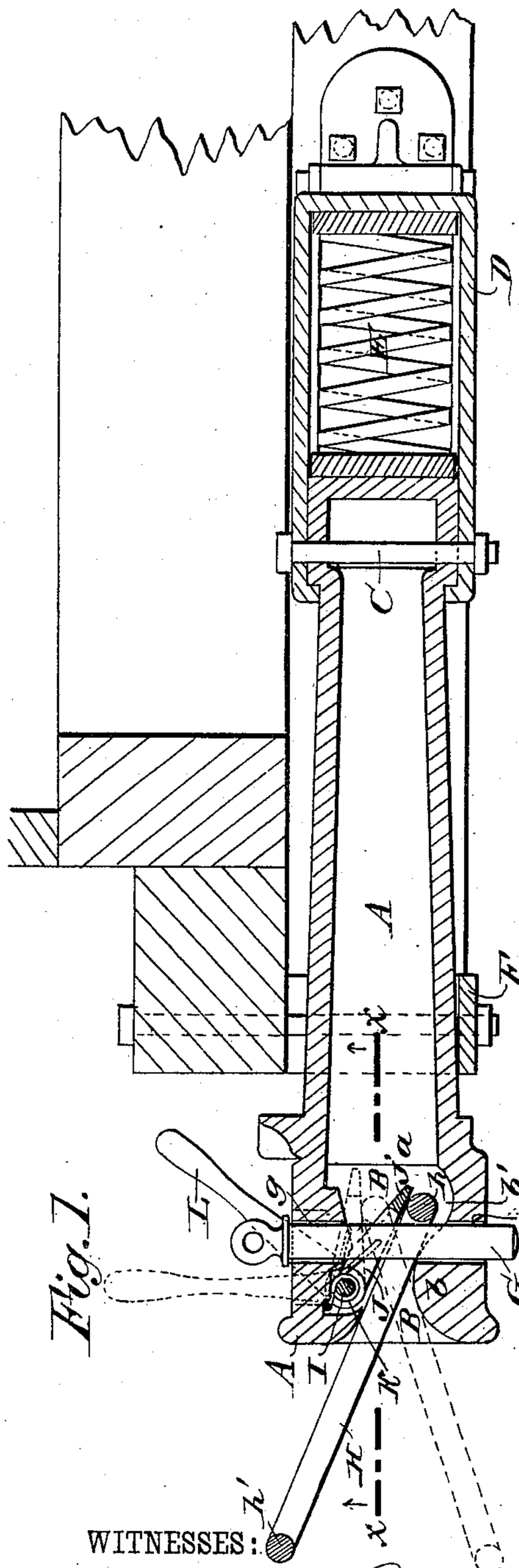

Fig. 1.

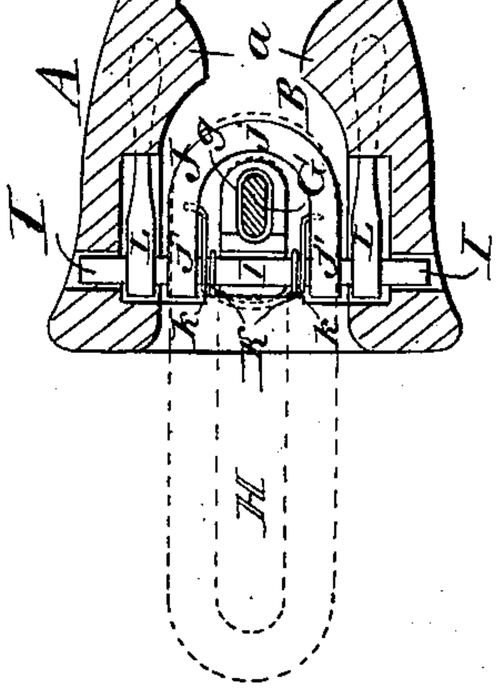

Fig. 3.

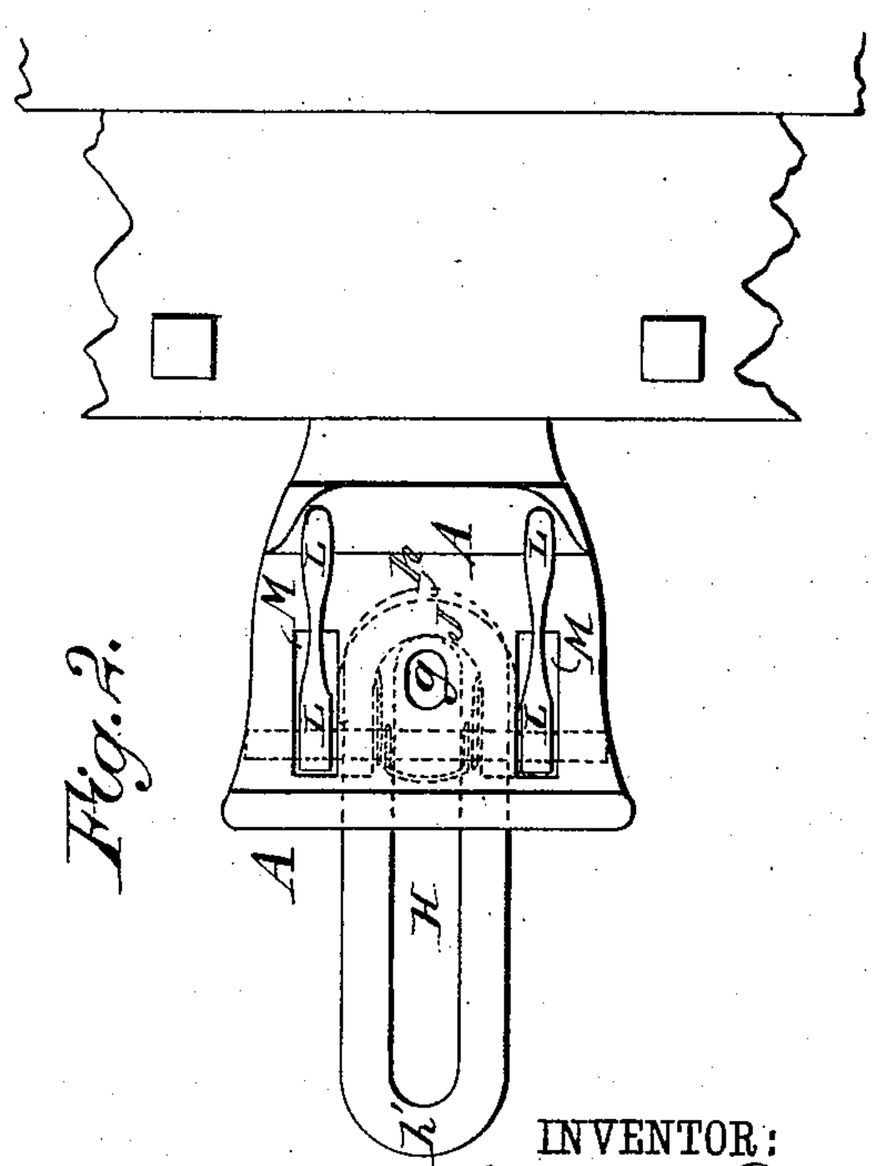

Fig. 2.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN O'BRIEN, OF AUSTIN, MINNESOTA, ASSIGNOR TO HIMSELF AND FAY R. SMITH, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 320,955, dated June 30, 1835.

Application filed October 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN O'BRIEN, of Austin, in the county of Mower and State of Minnesota, have invented a new and Improved Car-Coupling, of which the following is a full, cl ar, and exact description.

The objects of my invention are to prevent injury to train-men while coupling cars, and to facilitate the coupling of cars having draw-heads of unequal heights.

The invention consists in the construction and combination of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved coupling as applied to a car. Fig. 2 is a plan view, and Fig. 3 is a sectional elevation, of the draw-head, taken on the line *x x*, Fig. 1, and looking upward.

The letter A indicates the draw-head of my improved coupling, which is formed with the link-socket B, back of which lugs *a a* of the draw-head project toward each other to form a stop for the end of the link.

The draw-head A is made hollow and connects at its back end by a bolt, C, with the draw-bar D, which contains the buffer-spring or springs E, of any approved construction and arrangement, to receive the shocks in coupling the cars as they come together.

A strong strap or keeper, F, extends beneath the draw-head A to hold it up to place at the front of the car. The draw-head has a vertical hole at *g*, to receive the coupling-pin G, which holds the link H so that it may pass into the draw-head of an opposing car (not shown) to effect the coupling.

I is a shaft, which is journaled horizontally in the draw-head at the top of the link-socket, and has fixed to it the link-lifting plate J, which curves around behind the coupling-pin. In other words, the coupling-pin passes through the draw-head in front of the rear part, *j*, of the plate J, so that said part *j* comes directly over the end of the link H, held in the draw-head by the pin, and so that when the shaft I is turned to lower the plate J its part *j* or its side parts, *j'*, will press downward on the inner end, *h*, of the link H; and lift the outer end, *h'*, of the link to enter an opposite higher draw-head, as will be understood from the full lines in Fig. 1.

A spring, K, shown made of a single piece of elastic wire, having its side arms, *k k*, coiled loosely around the shaft I and bearing by their extreme ends beneath or in the plate J at each side, holds the plate up to its normal position, (shown in dotted lines in Fig. 1,) in which position the link H will hang inclining downward toward the outer end to enter the link-socket of an opposite lower draw-head for coupling on another car.

To the shaft I are fixed a couple of arms or levers, L, which pass upward through slots M made through the top wall of the link-socket, so that the levers may easily be reached by the hand from between the cars, or by a rod held in the hand from either side of the car, to swing the plate J downward, more or less, as may be required in coupling on cars having draw-heads of any height.

The floor of the link-socket B is formed with a rounded projection, *b*, and also may have a depression, *b'*, so that the link H may freely and easily be rocked on the projection *b* by the plate J for raising the outer end of the link to any required height for coupling.

The spring for holding the plate J up to place may have any suitable form or arrangement to serve the purpose.

If desired, the shaft I may be extended to one or both sides of the car to receive a lever or suitable handle on one or both ends for adjusting the link H from either side of the car, as will readily be understood.

By the use of my improved coupling cars having draw-heads of various heights may be coupled without requiring the train-men to stand between the cars and expose themselves to injury, and the ordinary link-and-pin devices are used. The coupling also is cheap, effective, and not liable to get out of order by any severe shocks of use.

I am aware that it is not broadly new to provide a pivoted lever-operated plate within a draw-head for elevating the coupling-link to engage draw-heads of different heights; and I do not claim such, broadly, as of my invention. These plates have been in most cases

pivoted in rear of the coupling-pin, so that when the cars bumped together the coupling-link was liable to be forced against said plates and break them. In one instance an upper and lower plate were used, the free edges of said plates extending toward the front of the draw-head. In this case should the upper plate hang downward and the lower plate incline upward accidentally the entering coupling-link would strike one or both of them and break them off. By pivoting the plate to the top of the draw-head recess in front of the coupling-pin, and arranging the free end of the plate toward the rear of the draw-head, the coupling-link cannot possibly injure it, as, even if the spring should from any cause fail to keep it elevated, the link would elevate it without injury.

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

1. The combination, in a car-coupling, and with the draw-head A, pin G, and link H, of a shaft, I, journaled in the top part of the draw-head in front of the coupling-pin, and carrying a plate, J, the free edge of which projects toward the rear of the draw-head, adapted to lift the outer end of the link when the shaft is turned, substantially as shown and described.

2. The combination, in a car-coupling, and with the draw-head A, having a projection, *b*, on the floor of its link-socket, and the pin G and link H, of the plate J, fixed to a shaft, I, journaled in front of the pin G, and the free edge of said plate J extending behind the pin, substantially as shown and described.

3. The combination, in a car-coupling, and with the draw-head A, pin G, link H, and plate J, fixed to a shaft, I, journaled in the top of the draw-head in front of the coupling-pin, the free edge of the plate extending in rear of said pin, as specified, of a spring acting to swing and hold the plate J upward, substantially as shown and described.

4. The combination, in a car-coupling, and with the draw-head A, pin G, link H, and plate J, the free edge of which extends in rear of the coupling-pin, said plate being held to a shaft, I, journaled in the top of the draw-head in front of the coupling-pin, as specified, of the arms or levers L, substantially as shown and described.

JOHN O'BRIEN.

Witnesses:
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