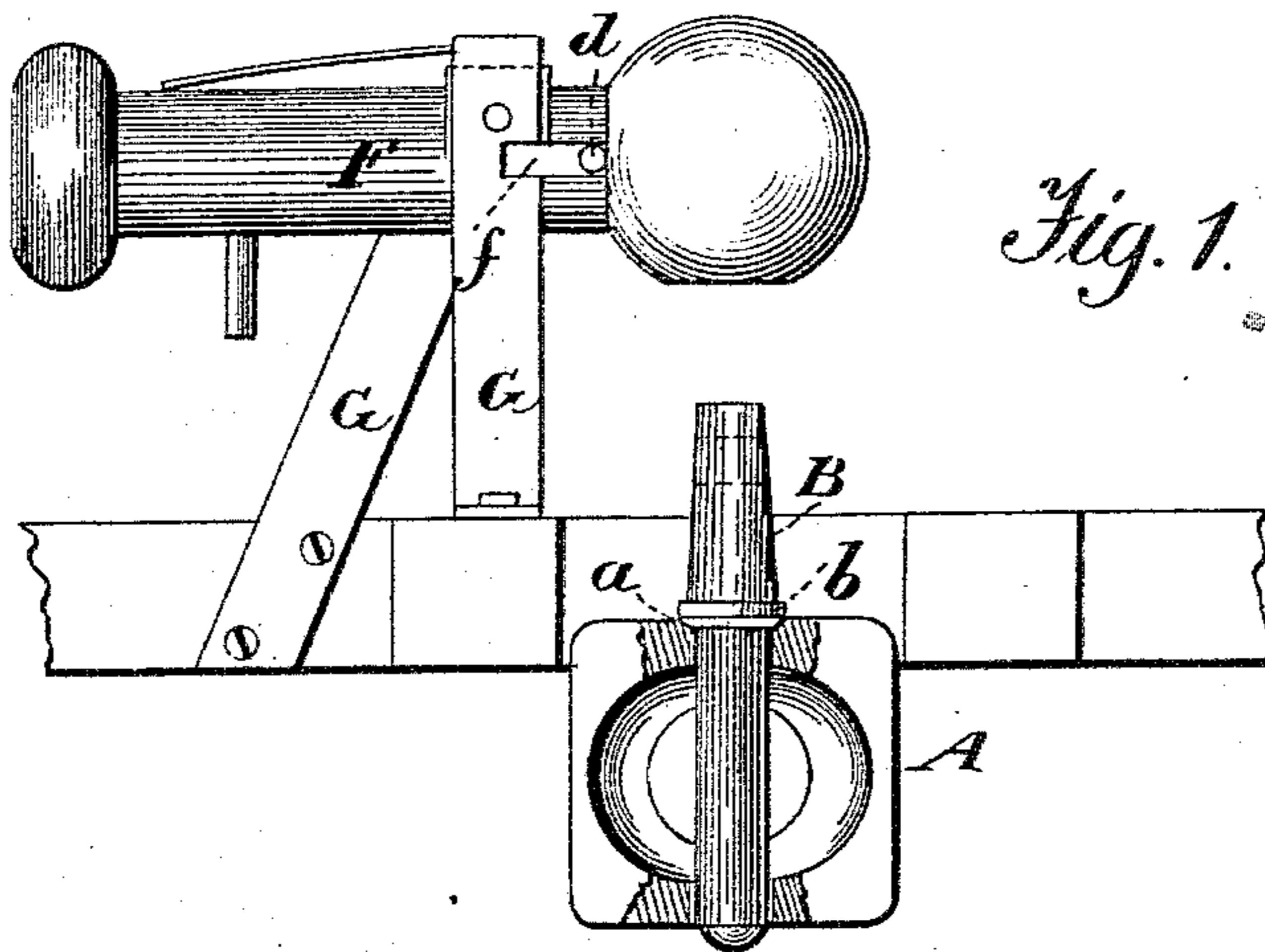


(No Model.)

L. B. HARRIS.  
CAR COUPLING.

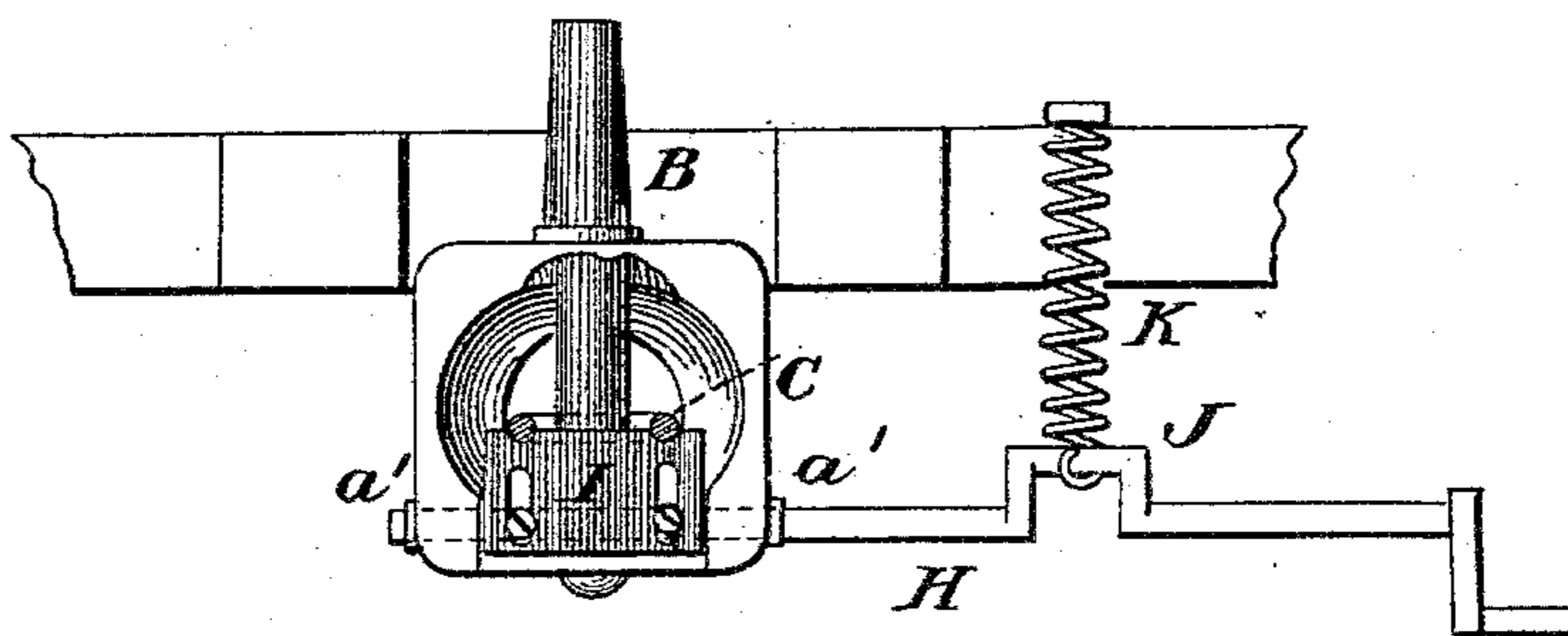
No. 414,531.

Patented Nov. 5, 1889.

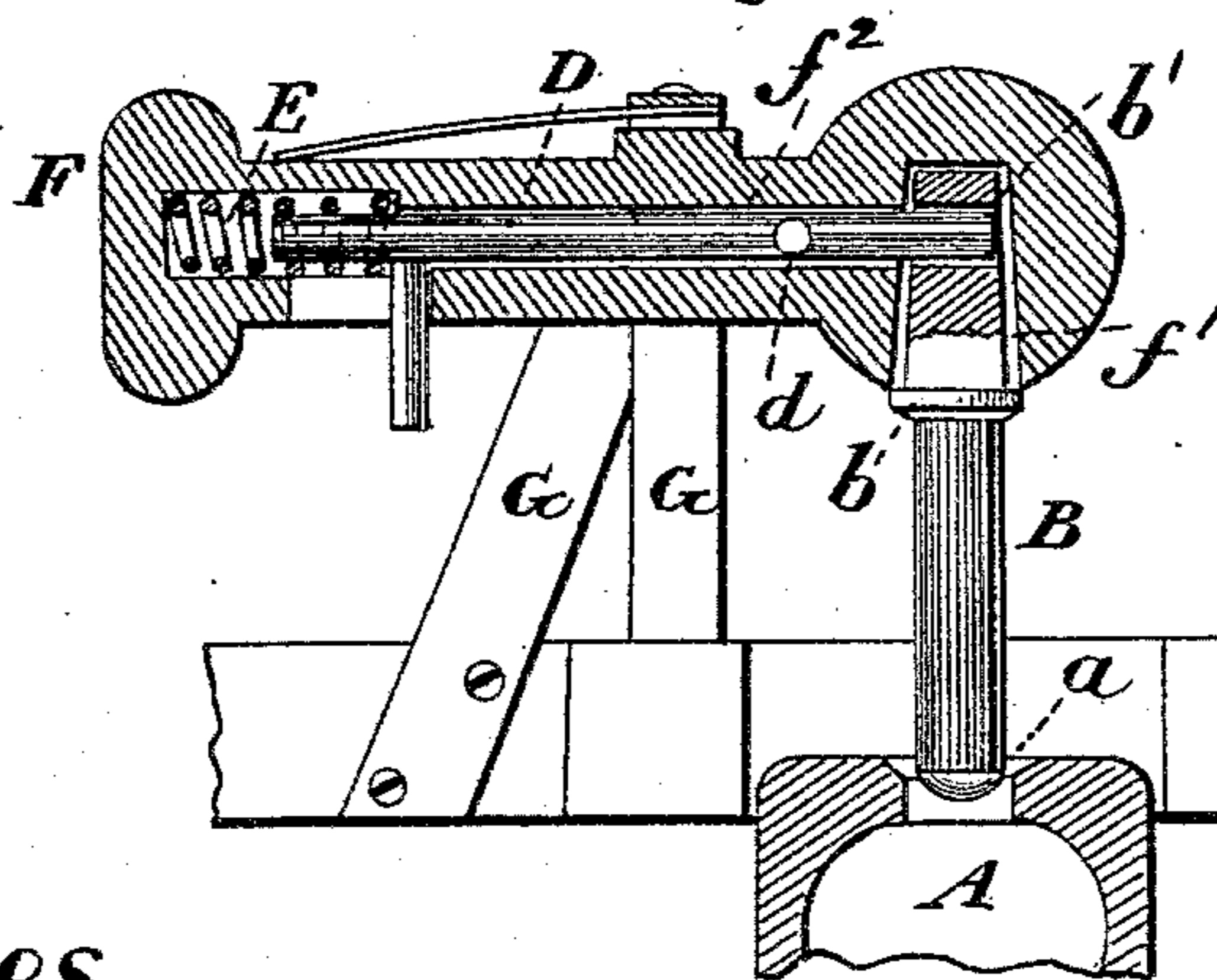


*Fig. 1.*

*Fig. 2.*



*Fig. 3.*



*Witnesses.*  
*A. Ruppert.*  
*H. A. Daniels*

*Inventor.*  
*Leri B. Harris*  
*Per*  
*Thomas Simpson*  
*att'y*

# UNITED STATES PATENT OFFICE.

LEVI B. HARRIS, OF WARRENSVILLE, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 414,531, dated November 5, 1889.

Application filed May 20, 1889. Serial No. 311,400. (No model.)

*To all whom it may concern:*

Be it known that I, LEVI B. HARRIS, a citizen of the United States, residing at Warrensville, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The invention relates to the link-and-pin coupler generally used on steam-railroad cars; and it consists of the hereinafter-described improvements, which are definitely pointed out in the claims.

Figures 1 and 2 of the drawings are front elevations of two car-trucks, showing, respectively, the novel means which I employ for dropping the pin and holding the link. Fig. 3 is a vertical cross-section of the pin-lever and its supporting-frame.

In the drawings, A represents the draw-head, B the pin, and C the link. The pin B is made with the shoulder *b*, which may rest in a countersunk hole *a*, so as to allow it to pass just the proper distance through the bottom hole of the draw-head. In this pin I make a hole *b'* near the top to receive the bolt D, which has a side stud *d* for thumb, finger, or hand pressure in shooting it back, and a spiral spring E, which throws it forward into the pin-hole *b'*. The stud *d* moves in a side slot *f* of the lever F, which is fulcrumed in and supported by the frame G, the latter being bolted or screwed to the truck.

*f'* is a vertical hole extending from the bottom of its front end above the longitudinal bolt-hole *f*<sup>2</sup>, but not through the lever, so that by putting the pin B up in the hole *f'* with its hole *b'* at right angles to the lever the bolt will be sure to enter the pin-hole.

When it is desired to uncouple, the lever is raised at the front end, the bolt pushed back, and the upper end of pin inserted in hole *f'*, when the stud *d* is relinquished and the pin bolted to or locked to the lever, which is then turned to a horizontal position. When it is desired to couple, the spring-bolt D is thrown back with the hand and the pin drops into the link which has just entered the draw-head.

In order that the link C may be held up in coupling two cars, I use the rod H, journaled at *a' a'* in the draw-head, provided with the link-lifter I and the crank J on one side of the draw-head. I connect this crank with the truck by the spiral spring K, so that the rod will be held in either one of two positions—namely, when the link-holder is turned up and also when it is turned down, each turn of the rod being about a half-revolution.

By my improvements the many accidents which occur in coupling the pin and link may be entirely prevented.

Having thus described all that is necessary to a full understanding of my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. The combination, with a car-coupling having the hole *b'*, of a bar or lever F, having the slot *f*, vertical hole *f'*, and longitudinal hole *f*<sup>2</sup>, and the bolt D, having the side stud *d* and the actuating-spring E, substantially as shown and described.

2. The combination, with the front of draw-head, of the rod H, having the crank J and the spiral spring K, whereby the link-lifter I will be held up or down, as described, and for the purpose set forth.

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

LEVI B. HARRIS.

Witnesses:

J. M. YOUNGMAN.

G. W. YOUNGMAN.