

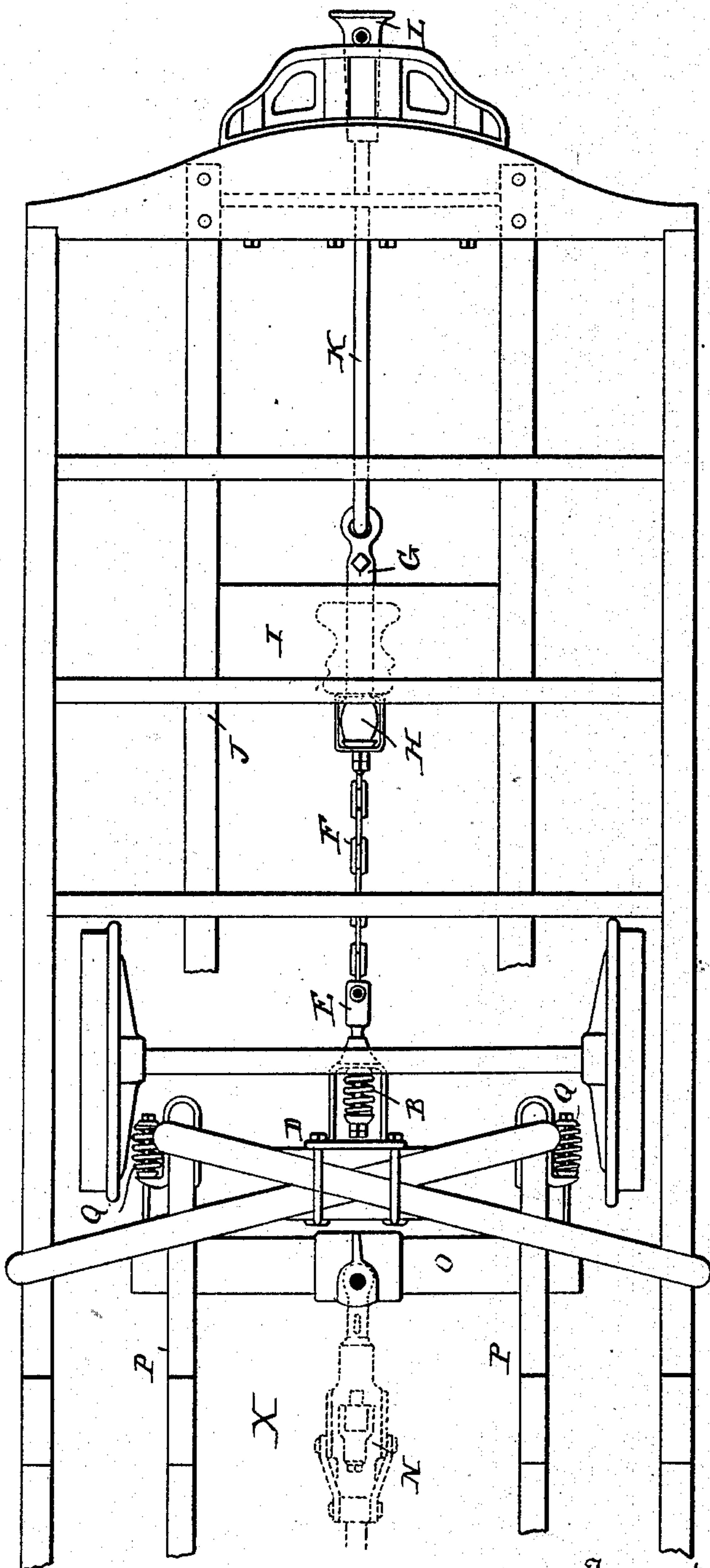
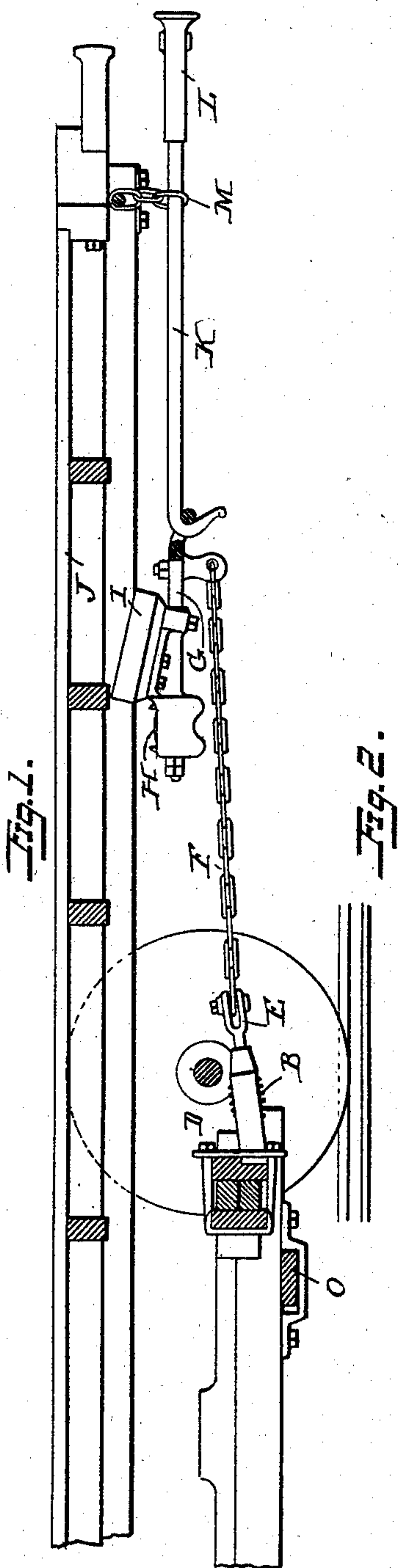
(No Model.)

J. STEPHENSON.

CAR DRAW HEAD.

No. 413,266.

Patented Oct. 22, 1889.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

CAR DRAW-HEAD.

SPECIFICATION forming part of Letters Patent No. 413,266, dated October 22, 1889.

Application filed August 10, 1889. Serial No. 320,394. (No model.)

To all whom it may concern:

Be it known that I, JOHN STEPHENSON, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Car Draw-Heads, of which the following is a specification.

In a single cable car traveling disconnected from the other cars no draw-head is necessary, because the motive power is in the cable, which is seized by the grip central with the car, at which point the impelling-force is applied. When the cable is gripped, the tendency is to take the car with it, causing jerks to the car and passengers, which jerks may be diminished by slipping the cable through the grip-jaws, but this is only a partial and an expensive relief. The objectionable features are increased when one or more cars are trailed by the grip-car, the connection usually being made to the car-body, which embarrasses the movements of the body, to the discomfort of its passengers, and otherwise. To obviate these difficulties, I make a connection with the car-truck, instead of with the body, at a point at which spring B intervenes between it and the cable, as fully set forth hereinafter, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of part of a car truck and frame illustrating my improvement. Fig. 2 is a plan of Fig. 1.

The point of connection between the cars in this case is preferably at the center of the cross-rail D of the truck, and is a housed draw-spring B, in which is an adjustable eye-rod E, connected by a chain F with the sliding bar G of a double-acting spring H in a housing I, secured to the car-floor frame J and the sliding bar by a stiff-bar connection K, with the draw or bumper head L, supported by a link or chain M, adapted to slide on a transverse bar at or near the car end. This combination forms an apparatus adapted to relieve the truck and the car-body from ill effects of the jerks and concussions to which the buffer draw-head is subject.

In the construction shown the truck-frame

is constructed with composite or cross bars at the ends, thereby elongating the well X, one portion of which only is shown in the drawings, and the grip-carrier N (shown in dotted lines) is connected to the transverse bar O of the truck, which in turn is connected to the cheek-sills P by the crushable springs Q, so that the grip-carrier is free to move in this well, and by the connections above described the truck, when the cable is gripped, can start its movement before the car-body is impelled, so that the latter begins to move more gradually than would otherwise result.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A car draw-head apparatus with the head supported by a link or chain hanging on a transverse bar near the car end, whereby the buffer draw-head may have freedom of motion in any required direction, substantially as and for the purpose described.

2. A car draw-head apparatus having a draw-head with its draw-spring secured to the cross-rail of a car-truck, with its grip-carrier having freedom of motion in a central well of the truck and yieldingly connected with the frame to allow the cable when gripped to put the truck in motion before starting the car-body, substantially as and for the purpose described.

3. A car draw-head apparatus consisting of a buffer draw-head supported at one end of the car by a link or chain on a transverse bar, and connected by a stiff bar with a spring sliding bar, on which is a double-acting spring capable of being crushed by pull or push of the buffer draw-head, the spring sliding bar having chain-connection with a draw-spring attached to the car-truck, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN STEPHENSON.

Witnesses:

JOSEPH B. STEPHENSON,
S. A. STEPHENSON.