

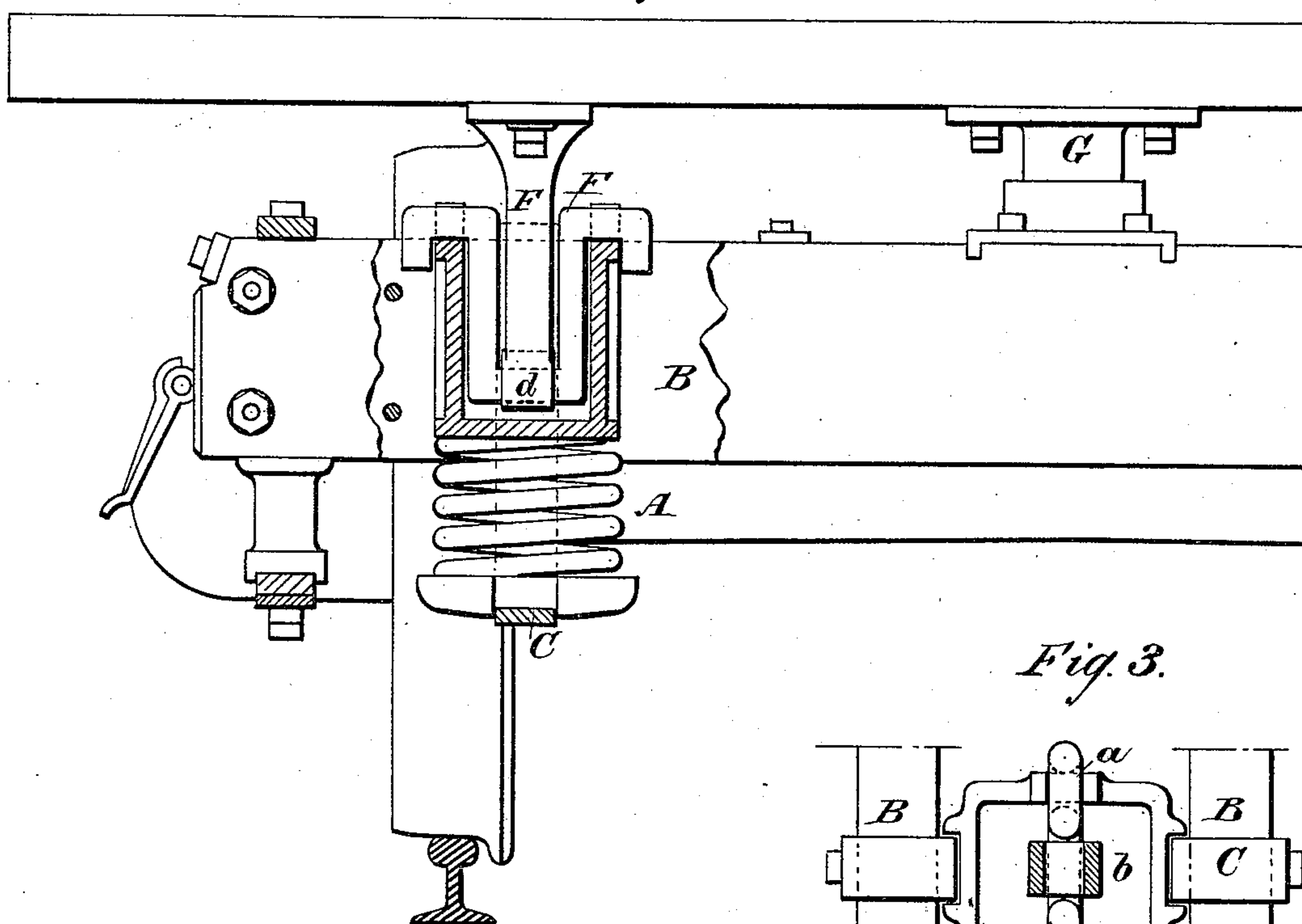
(No Model.)

F. E. CANDA.  
CAR TRUCK.

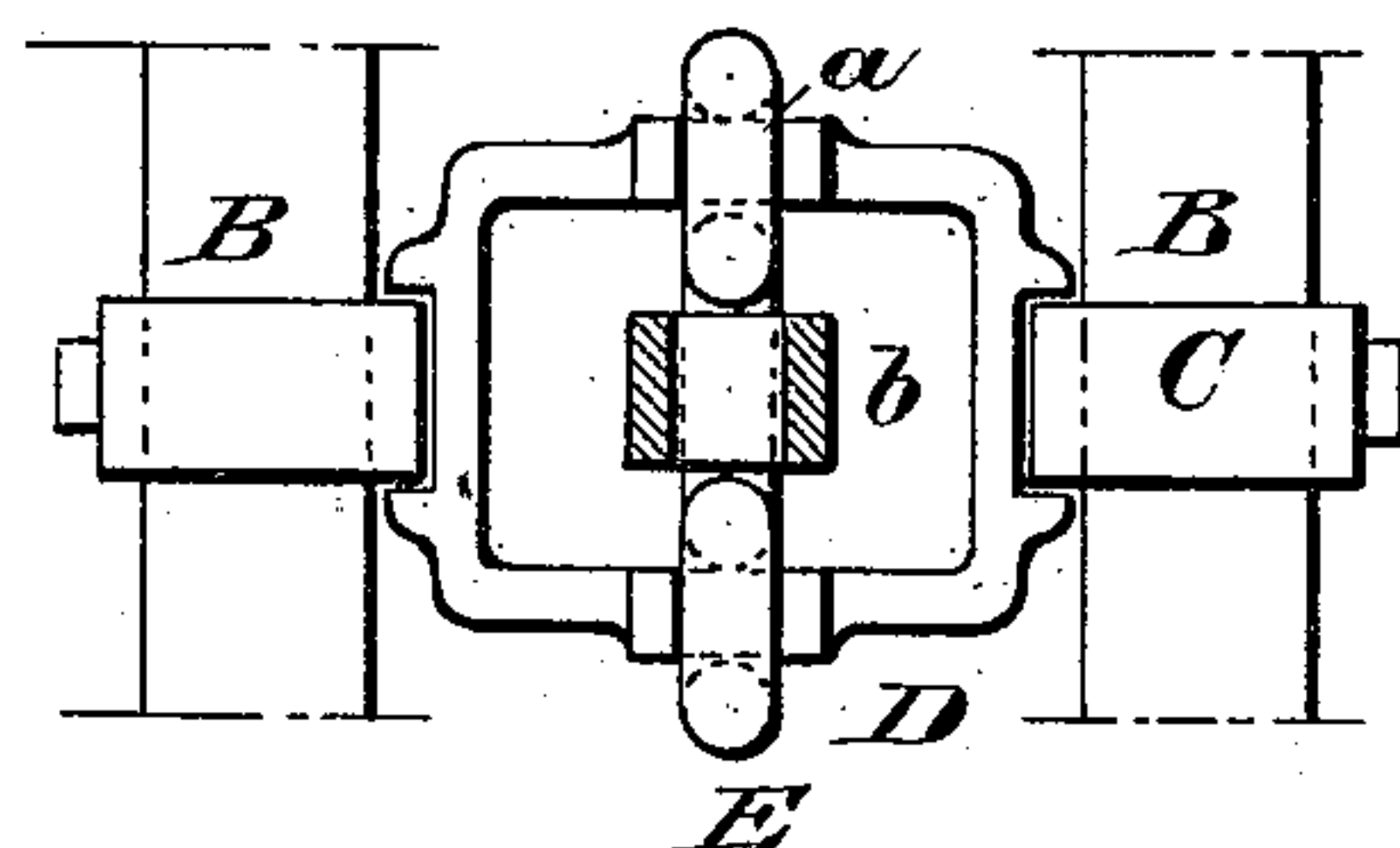
No. 461,318.

Patented Oct. 13, 1891.

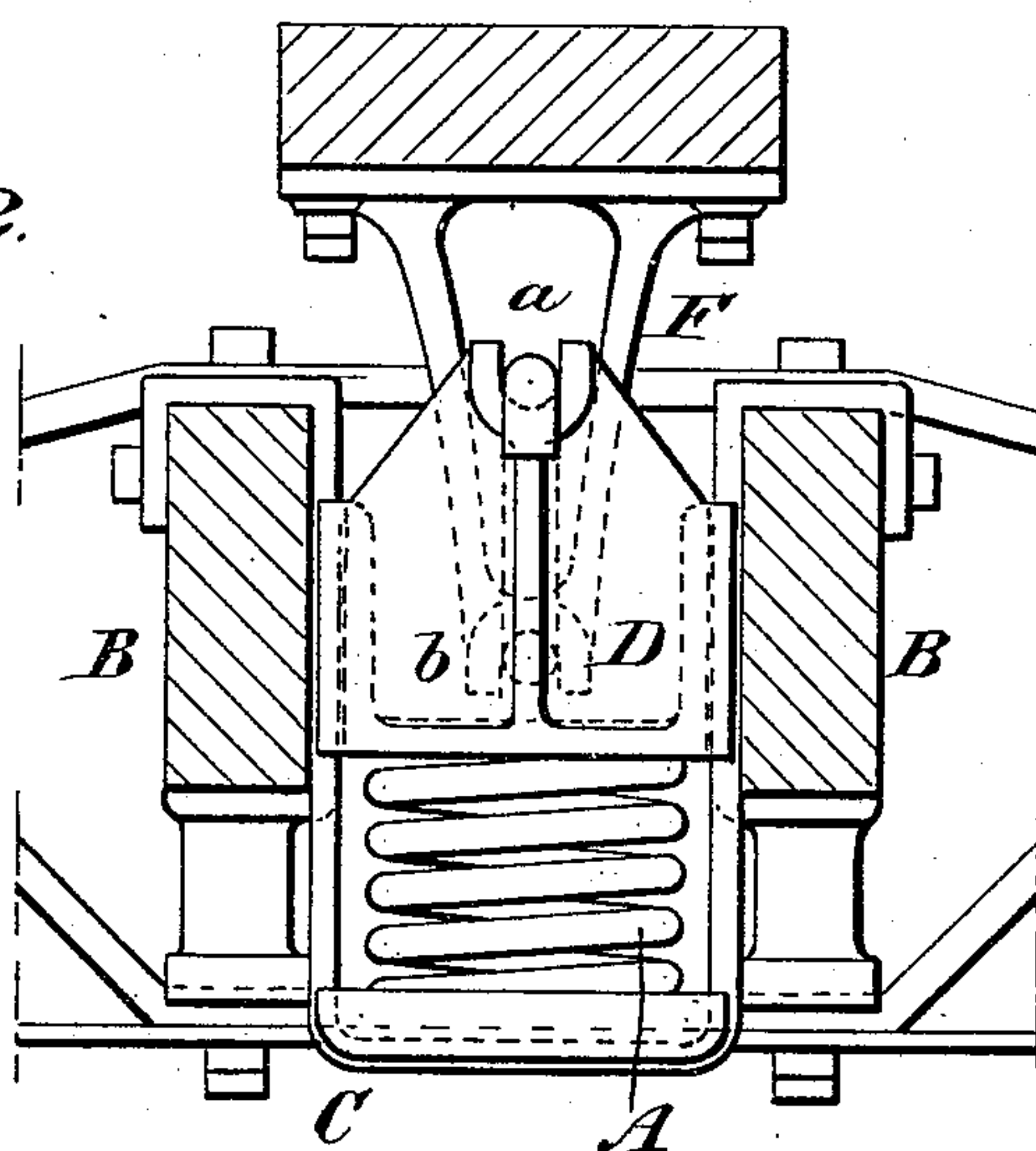
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



WITNESSES:

*Don Twitchell*  
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INVENTOR:

*F. E. Canda*  
BY *Munn & Co*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

FERDINAND E. CANDA, OF NEW YORK, N. Y., ASSIGNOR TO THE SUSPENSION  
CAR TRUCK MANUFACTURING COMPANY, OF SAME PLACE.

## CAR-TRUCK.

**SPECIFICATION** forming part of Letters Patent No. 461,318, dated October 13, 1891.

Application filed May 26, 1891. Serial No. 394,097. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND E. CANDA, of New York city, in the county and State of New York, have invented new and useful Improvements in Car-Trucks, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a front elevation, partly in section, of a portion of a car-truck constructed according to my improvement. Fig. 2 is a vertical transverse section of one of the car-supporting devices, and Fig. 3 is a sectional plan view of the same, showing the arrangement of the stirrup and stirrup-case.

Similar letters of reference indicate corresponding parts in all the views.

In cars as heretofore constructed, the body of the car is carried from the center of the truck-bolsters, the truck-body center plates, and king-bolts, one at each end of the car at the center of each truck, and bearings placed on either side of the king-bolt having a certain amount of space or play in them to enable the trucks to adjust themselves to the curves of the road. The body of the car is carried from two central points, one over the center of each truck, and the car-body oscillates from the side bearings on one side to the side bearings on the other side, as gravity and the momentum of the car changes its position. This motion varies according to the degree of curvature and speed, and occasions at times severe shocks, which have been found very injurious in certain traffic.

An improvement on the foregoing was to have the car-body suspended by stirrups carried by the car-truck and struts attached to the car-bolster. An example of this construction is seen in Patent No. 369,098, issued to me August 30, 1887; but, according to the construction therein shown and described, no provision was described in said patent for the prevention of the drawing in of the ends of the stirrups by the action of the superposed weight, and car-supporting devices constructed without such provision have been found liable to become inoperative after a time, from the drawing in of the ends of the stirrups to such a degree as to cause them to interfere with the free motion of the struts

resting on the stirrups, or to altogether prevent the movement of the strut back and forth through the upper portion of the stirrup. To overcome these objections, to secure an easy-riding car, and to prevent the interference of the stirrup with the free movement of the strut in the suspension device, I have designed the form of side bearing for car-trucks herein shown.

In constructing the truck, I dispense with the use of the usual truck-bolsters and spring-plank. The springs A are suspended from the transoms B by a yoke or strap C. The said yoke or strap serves as a guide for the spring-follower D. The spring-follower is made to rest squarely upon the spring, and is provided in opposite sides with vertical grooves for receiving the vertical side portions of the yoke or strap C. In the top of opposite sides of the spring-follower are formed sockets *a* for receiving the stirrup E, and the spring-follower is sloped downward away from the sockets *a*. The stirrup E is formed of a bar of iron or steel bent twice at right angles, with parallel arms extending upwardly in the follower D to a point opposite the sockets *a*, where they are bent downwardly, forming bearings which rest in the sockets, and the extremities of the bar outside of the sockets are bent downwardly, thus forming a stirrup with hooked ends which rest in the sockets and engage the outer surface of the follower D upon opposite sides, and thus prevent the drawing in of the ends of the stirrup when an extraordinary load is put upon the car-body. Over the stirrup E is placed a strut F, which is bolted to the car-body bolster. The lower end of the strut is formed with a socket *b*, which rests upon and partly surrounds the lower horizontal part of the stirrup. The truck is swiveled on a king-bolt G, but no part of the weight of the car or its load is carried in the center of the truck, the entire load being carried on four points on each truck—that is to say, the four side bearings or stirrups. This construction enables the trucks to adjust themselves to the curves of the road, whether of long or short radius, thus preventing the oscillation common to ordinary trucks and causing the truck to adjust itself automatically to the irregu-



larities of the track, at the same time acting as equalizers to the body and avoiding shocks common to the ordinary trucks.

I am aware that a U-shaped stirrup has been used in connection with a strut for supporting a car, an example of the same being shown in the patent to which reference has been made. Therefore I do not broadly claim the combination of the spring-follower and the stirrup.

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

1. A stirrup for the side bearings of a car, formed of a bar bent twice at right angles, with the parallel arms thus formed bent outwardly to form bearings and downwardly out-

side of the bearings, whereby the drawing in of the ends of the stirrup is prevented, substantially as specified.

2. The combination, with the spring-pressed follower provided with sockets on opposite sides, of a stirrup formed of a bar bent twice at right angles, with the parallel arms thus formed bent outwardly to form bearings fitted to the sockets of the follower and bent downwardly outside of the sockets for engagement with the sides of the follower, substantially as specified.

FERDINAND E. CANDA.

Witnesses:

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