

(No Model.)

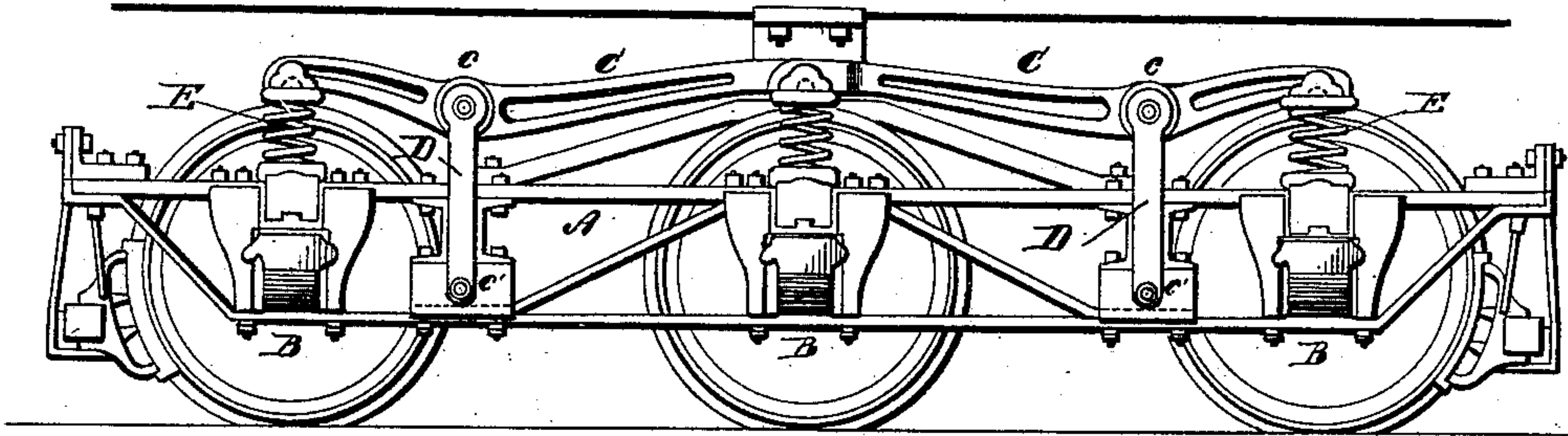
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J. R. FISH.

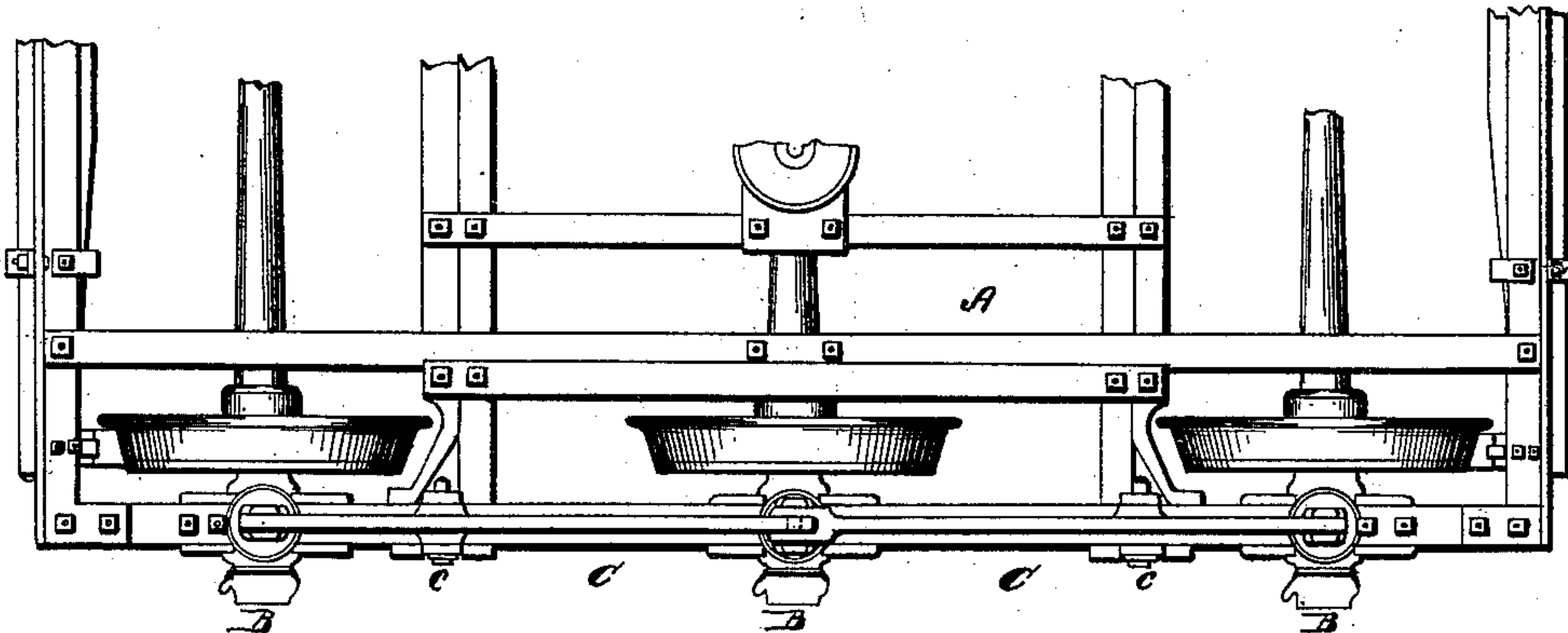
CAR TRUCK.

No. 378,925.

Patented Mar. 6, 1888.



*Fig. 1.*



*Fig. 2.*

WITNESSES.

*Samuel C. Thomas.*  
*H. B. O'Gherly.*

INVENTOR

*John R. Fish.*  
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(No Model.)

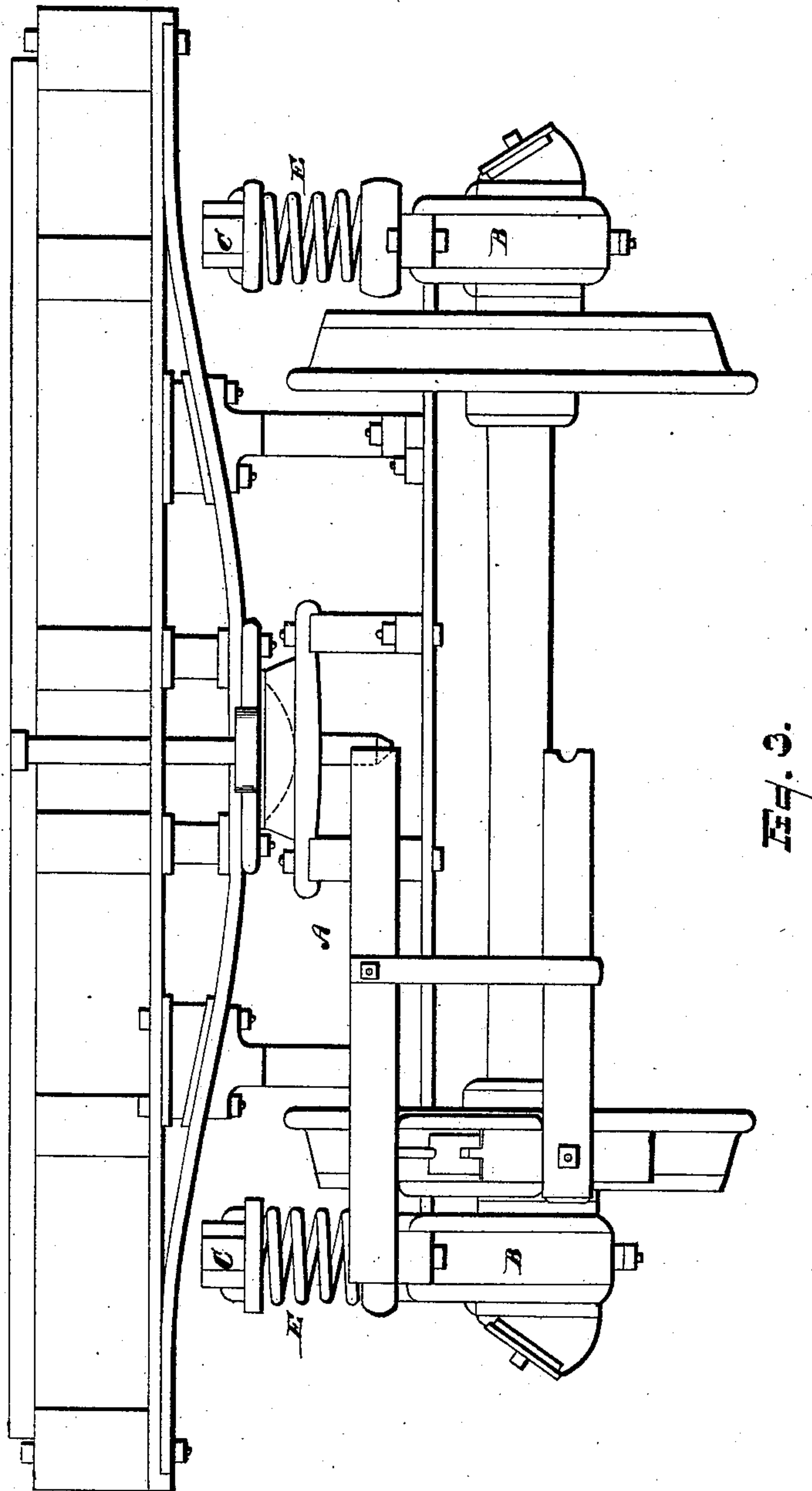
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# UNITED STATES PATENT OFFICE.

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## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 378,925, dated March 6, 1888.

Application filed July 19, 1887. Serial No. 244,739. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN R. FISH, of Grand Rapids, county of Kent, State of Michigan, have invented a new and useful Improvement in Car-Trucks; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists of the devices and combination hereinafter specified, and more particularly pointed out in the claims.

It is the purpose of this invention to produce a construction adapted to a six-wheeled truck, which shall, with other features of improvement, embody the principles of the invention secured to me by Letters Patent No. 355,069, dated December 28, 1886.

In the drawings, Figure 1 is a side elevation of a six-wheeled truck embodying my invention; Fig. 2, a plan view of the same; Fig. 3, an end elevation.

A represents the truck-frame; B, the journal-boxes; C, my improved equalizing-bars; D, means whereby the bars are pivoted to the frame.

E represents springs, which in the drawings are shown as located immediately over the journal-boxes.

In my patent referred to it will be observed that the equalizing-bars are pivoted at their middle points; but in a six-wheeled truck I pivot them at points *c* nearer to the extreme axle than to the middle axle, so that when the weight of the car is thrown upon the two equalizing-bars it will be distributed uniformly upon the three journal-boxes, and it is this feature of pivoting the equalizing-bar at a point off from its center, so as to distribute the strains unequally at its two extremities, that constitutes one of the prime features of this improvement.

The means for securing the equalizing-bars to the truck (shown in the drawings) consists of links or stirrups D, the lower ends of which are fastened in any convenient way to the truck-frame--as, for instance, by pivots *c'*--while the equalizing-bars are pivoted at their upper ends at *c*; but this particular construction, while well adapted for the purpose, is

not absolutely essential, and may be considerably varied without departing from my invention. Thus, for instance, instead of a pivot passing through the equalizing-bar, the stirrup D might pass to the upper edge of the equalizing-bar and the two be united by simply a trunnion-connection. So, also, the stirrup might be made in the form of a rigid support, connected with any part of the truck-frame. I would also have it understood that the springs might be located directly upon the boxes, as shown, or there might be a projection upward from the box and the spring be connected therewith, so as to transmit its pressure through the latter to the journal-boxes. So, also, it is not absolutely essential that the springs should be located immediately over the journal-boxes; but instead thereof they may be located therein, in front of, or to the rear of the axle, which feature constitutes the subject of another application for Letters Patent filed by me of even date herewith, and is only here claimed with an equalizing-bar which is pivoted nearer one of its ends than at the other.

I have described this device solely in connection with a six-wheel truck. It is, however, manifest that it is clearly applicable to an eight-wheel truck, in which event the equalizing-bars at the two extremities of the truck would be pivoted nearer to one extremity than the other, while the intermediate equalizing-bars might be pivoted at their middle points.

It will be observed in the drawings that the pivotal point in each equalizing-bar is at a distance one-third of its length from the extreme axle, while the remaining one-third of each equalizing-bar will be transmitted to the middle axle, thus equalizing the load upon the three axles.

If for any reason it is desirable to vary the relative proportions of the load at the two ends of the equalizing-bar, or any equalizing-bar, it may be accomplished by shifting the position of its pivotal connection.

I would have it understood that by the term "pivotal engagement" I would comprehend any method of attachment which would permit the bar to flex about the point of engagement, and which will transmit the load to the bar at this point.

What I claim is--



1. The combination, with a car-truck and two of the axles thereof carrying journal-boxes, of an equalizing-bar pivotally engaged with the truck at a point intermediate said axles, springs bearing upon the journal-boxes and located beneath and engaging with each end of the equalizing-bar, through which the load is transmitted to the journal-boxes, the pivotal engagement being nearer to one extremity than the other of said bar, whereby the load upon any equalizing-bar may be unequally divided at its extremities, substantially as described.

2. The combination, with a six-wheel truck, of two sets of equalizing-bars, one in front of and one in rear of the middle axle, said equalizing-bars pivotally engaged with the truck-frame and provided with springs beneath their ends, through which the load is transmitted to the journal-boxes, the pivotal engagement of each bar being nearer to one extremity than to the other of said bar, whereby the load upon any equalizing-bar may be unequally divided at its two extremities, substantially as described.

3. The combination, with a six-wheel truck,

of two sets of equalizing-bars pivotally engaged therewith, one set in front of and one in rear of the middle axle, and provided with springs beneath their ends, whereby the load is transmitted to the journal-box and pivotal engagement, said equalizing-bars being at their points about one-third of their length from the extreme axles, whereby they are adapted to equalize the load between the three axles, substantially as described.

4. The combination, with a truck-frame, of an equalizing-bar pivotally engaged therewith intermediate two of the axles thereof, the stirrup D, connected at one end with the equalizing-bar and at its other end pivoted to the truck-frame, and the springs E, engaging with each end of the equalizing-bar and bearing upon the journal-boxes of the axles, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN R. FISH.

Witnesses:

M. B. O'DOHERTY.

SAMUEL E. THOMAS.