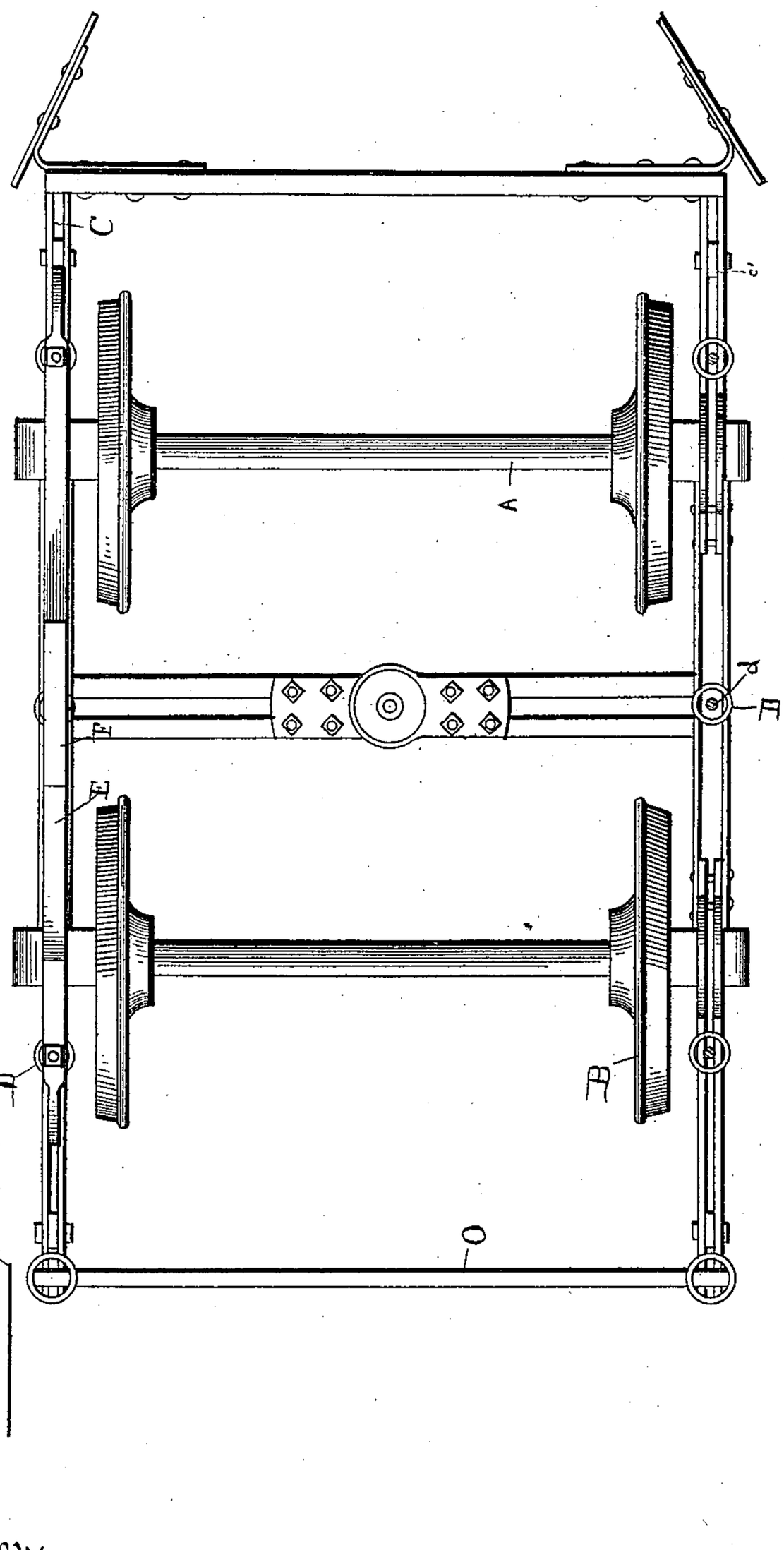
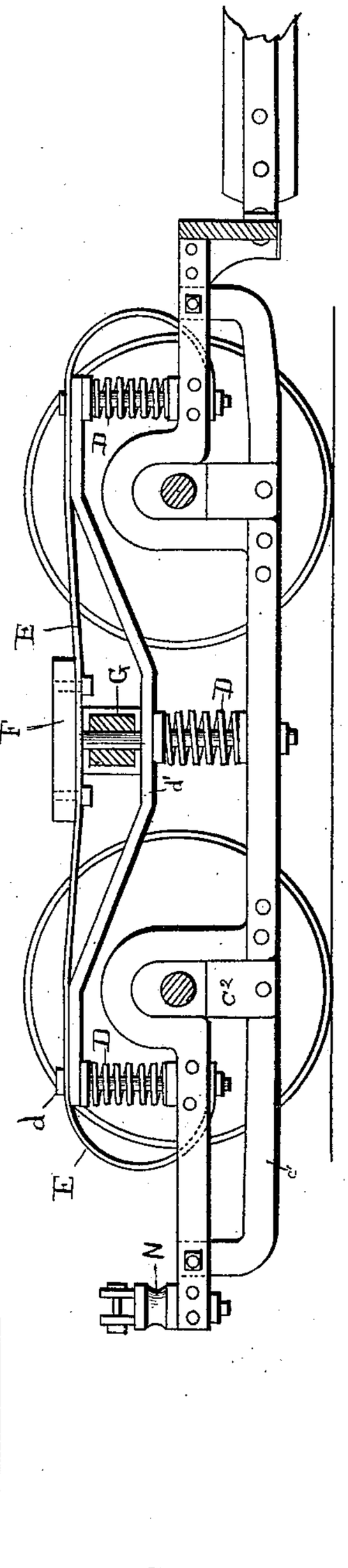
(No Model.)

# J. T. ROBINSON.

## CAR TRUCK.

No. 464,041. Patented Dec. 1, 1891.




Witnesses
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# UNITED STATES PATENT OFFICE.

JAMES T. ROBINSON, OF ALTOONA, PENNSYLVANIA.

## CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 464,041, dated December 1, 1891.

Application filed March 28, 1891. Serial No. 386,744. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES T. ROBINSON, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Car-Trucks; and I do hereby 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.

My invention relates to car-trucks generally, but more especially to the class known as "pivotal" or "radial" trucks.

The object of my invention is to provide a radial or pivotal truck that will not be subject to the "side" or "lateral" motion, and one that is simple in construction; and with these objects in view my invention consists of the parts and combinations of parts, as will be more fully set out in the description and claims.

In the drawings, Figure 1 is a side elevation of my truck, partly in section. Fig. 2 is a top plan view of the same.

A represents the axles of the truck, and B the wheels thereof.

C and C′ are the side frames, which are bent into a yoke at the inner ends, said yokes affording a bearing for the journal-boxes.

*c* are bars, which connect in a suitable manner the two side frames C and C′. Pivoted in a suitable manner to the side frames C and C′ are bars or levers *c*′, which are secured, respectively, at their rear ends to the lower ends of the yokes. Near the rear ends of these levers *c*′ is secured a stool or cushion $c^2$, which abuts against and under the journal-box. It is obvious that upon releasing the rear ends of the levers *c*′ they will drop down of their own weight, carrying the stool $c^2$ with them, whereupon the wheels may be readily and easily removed.

Upon the side frames C and C′ are secured, respectively, springs D, which are secured to said frames by a suitable bolt *d*, and connecting these springs D is a truss *d*′, through which the bolt *d* passes. The circular braces E run from one end of the truck to the other, and the bolt *d* passes through them, as indicated in the drawings. The ends of these circular braces pass between the steel side bars or frames, and are connected with the bottom of the bolts *d*, thus preventing lateral or side motion and at the same time tying the upper and lower side frames together. Bolted or otherwise secured to the circular braces E is a wooden or other suitable sliding bar-block F, secured on braces E. The pivot-plate *f*, which is of very simple construction, is secured to the bolster G, hereinafter referred to. Secured between the circular braces E and the brace *d*′ are channel bars or castings G, which are substantially U-shaped in cross-section. The channel-bars form the bolster, and, being arranged or situated in the truss formed by the braces E and *d*′, allow the car-body to be placed near the rails.

N is a motor-hanger secured to and between the side bars of frame. This hanger may be arranged for any motor or entirely dispensed with for cable or steam power.

O is the motor-hanger bar.

The general construction of this truck is such that the car-body rides nearer the rails, whereas most trucks now in use hold the car-body so high from the rails that it not only makes it inconvenient for passengers to enter or leave the car, but it also subjects the car-body to the disagreeable jerky and rolling motion so often experienced in the motor-cars now in use. In addition to placing the car-body low I provide the truck with the braces E and *d*′, the former of which, being to a certain degree elastic and mounted on springs, takes up the motion of the truck and allows the car-body, *per se*, to be free of any lateral or other disagreeable motion. By placing the motor-hanger in the position shown in the drawings I am enabled to readily remove or replace the motor without disturbing the side frames of the truck in any manner.

Springs D, it will be noticed, are so distributed that they will take up the weight equally, thus allowing the truck to run even.

What I claim, and desire to secure by Letters Patent, is—

1. In a pivotal truck of the character described, an elastic brace, said brace serving to unite the upper and lower frames of said truck, substantially as described.

2. In a pivotal truck of the character described, the combination, with an elastic brace,

of a rigid brace connected to said elastic brace in a suitable manner, said braces forming a truss, substantially as described.

3. In a pivotal truck, the combination, with the braces E and *d'*, of the springs D, placed as and for the purpose specified.

4. In a pivotal truck of the character described, the combination, with the elastic braces and a ridged brace forming a truss, of a bolster located therein, substantially as and for the purposes specified.

5. In a pivotal truck, the combination, with the lower frames and a motor-hanger secured to the end of one of said frames, of the brace E, the ends of which are secured between the bars composing said frames, sliding block L, secured to said brace E, the brace *d'*, which with brace E forms a truss, a bolster G, secured in said truss, and the springs D, said brace E tying the upper and lower side frames together, substantially as described.

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

JAMES T. ROBINSON.

Witnesses:

WILLARD P. BEARDSLEY,

C. YERGER.