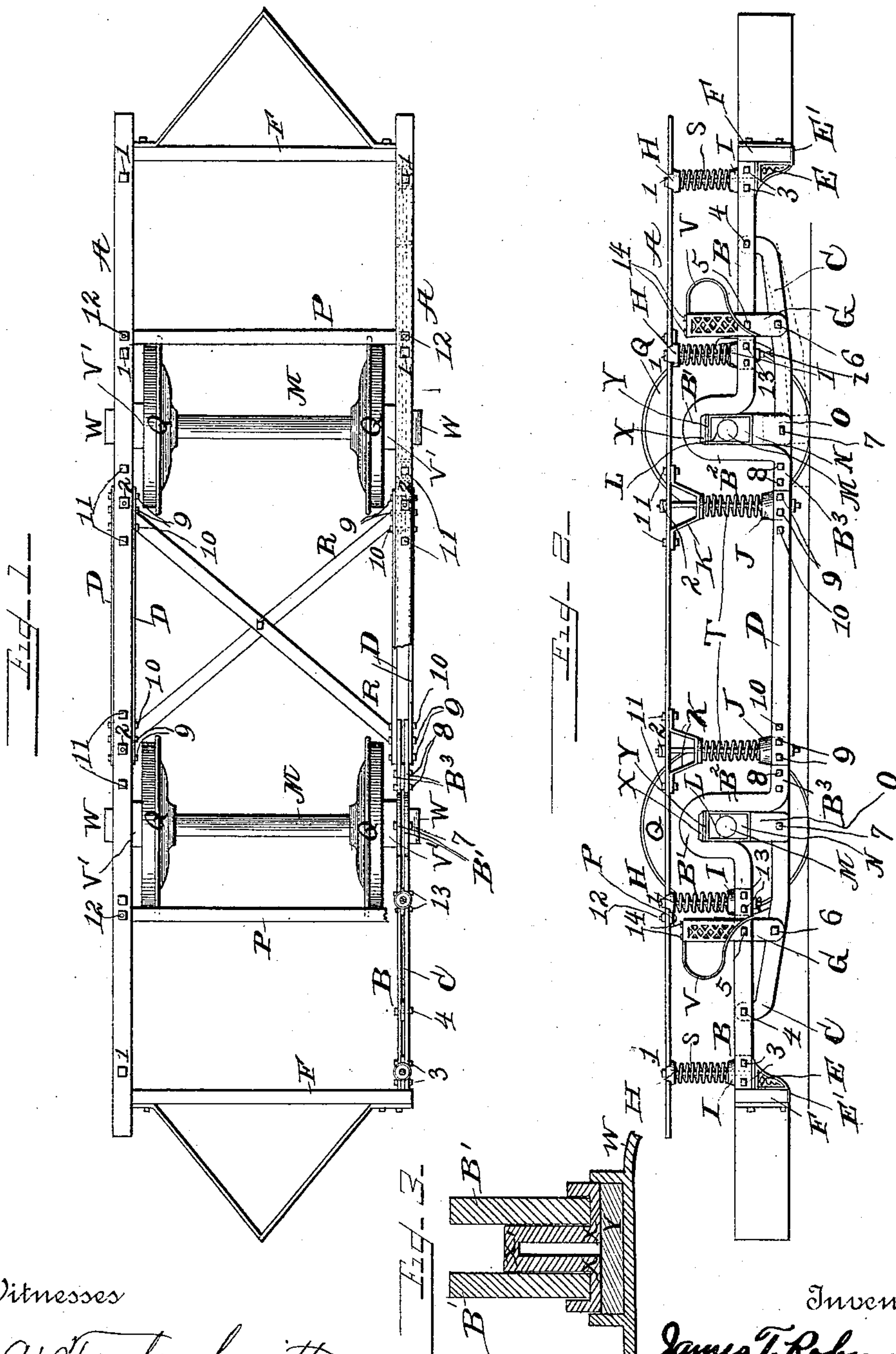


(No Model.)

J. T. ROBINSON.
CAR TRUCK.

No. 451,952.

Patented May 12, 1891.



Witnesses

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JAMES T. ROBINSON, OF ALTOONA, PENNSYLVANIA.

CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 451,952, dated May 12, 1891.

Application filed December 27, 1890. Serial No. 375,967. (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 trucks for cars propelled by any motive power.

The objects of my invention are, first, to make an anti-vibrating interchangeable all-steel truck; second, one that has side frames the portions of which serve as bearings for the axles; third, one that with its side frames intact may be lifted up with the car-body for the purpose of removing the car-wheels; fourth, one that is adapted for any motor; fifth, one from which armatures can be removed at the sides without disturbing the side frames, and the entire motor can also be removed without tearing the side frames down; and with these objects in view my invention consists in the parts and combinations of parts, as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of my improved truck. Fig. 2 is a side elevation of the same. Fig. 3 is a detail view or section of yokes B' B'.

A represents the top side frames, adapted to be bolted to the car-body P, the top cross-bars connecting the top side frames A by means of bolts 12 12.

B B are side frames, which when in position lie, respectively, between the axles and the ends of the car. These side beams B are bent into a yoke of U shape at B'. The end B² of said frame B is extended some distance down below the plane of the frame proper B, and bent again into a horizontal plane at B³.

D are bars which are bolted by bolts 9 10, preferably outside, to the ends B³ of frame B.

M is the axle, and Q are the truck-wheels.

L are the bearing-brasses, and N the oil-box.

X is the cap over the oil-box.

Y is a leather cushion.

The oil-box, axle, and bearing-brasses, as

will be seen by the drawings, all lie in the yoke B'.

C is a bar pivoted between the bars or frames B by means of a bolt 4, and connected between the ends B³ of bars B B by means of bolts 8 8. Secured to this bar C is a stool O, straddling the bar C and bolted to the same by bolt 7. This stool O, when the bar C is bolted in position, bears up against the oil-box N and keeps the axle, &c., in place in the yoke B'. It also serves to prevent the truck from galloping.

E are brackets bolted between bars B B by bolts 3 3, and are provided with projecting bottoms E', which serve to support end planks F F, and said end planks connect the side frames B B.

G is a brake and spring hanger bolted to frames B and bar C by means of bolts 5 and 6. These brake and spring hangers G also serve as braces to the entire side frame.

V is the brake-spring bolted to hanger G by means of bolts 14, and Z is the brake-shoe.

Secured between the bars B by bolts 13 are pockets I I, in which are seated the springs S. H H are top seats for said springs. Said top seats are secured to the top side frames in a suitable manner. Suitable steel rods are run through the center of these springs to keep them in a vertical position.

J J are spring-pockets bolted between bars B and B with bolts 9 9, and K is the cap and pedestal for said springs and is secured to the top side frames A by means of bolts 11.

T are the springs which are seated in the pockets J. A suitable steel rod is run through the center of these springs to keep them in a vertical position.

V' is the hub of the wheel Q, acting as a dust-box, and W is the lid of the oil-box.

R are cross-braces, the ends of which are bolted between the bars B B with bolts 10.

It will be readily seen that the bar or lever C serves two purposes: first, it, with the stool O, holds the car-axle and box in position in the yoke B'; second, it equalizes the weight throughout the truck-frame in case the heaviest weight is on either end of the car. It also in a measure relieves the yoke B' of great weight.

The object and purpose of extending the

end B² of the bar B below the bar proper is to make the space between the top frame A and lower frame or bar D of sufficient height to enable one to place in position or remove the armature at the side of the car without disturbing the side frames. By this construction the entire motor may also be removed without disturbing the side frames. It is customary with the truck now in actual use to run the truck over a pit when it is desirable or necessary to remove the armatures or the entire motor, and, indeed, in many cases it is necessary to tear down the side frames and other parts of the truck to remove the armatures or entire motor. I obviate all of this by the herein-described construction.

In case it becomes necessary to remove a worn wheel or broken axle I remove bolts 6 and 8 8. The bar or lever C, with the stool Q, will then drop down at one end, as shown in dotted lines, by its own weight, the other end turning on the bolt 4, which acts as a pivot. The car is then elevated a slight distance by any suitable means and the axle and wheels rolled out and new ones placed in position. The bar or lever C is then lifted and secured in its proper position. The stool O, in addition to its hereinbefore-described purposes, also serves to prevent the truck from "galloping," as hereinbefore stated. I have found that by placing the springs S S and T T in the position shown in the drawings the car rides steadier, and is not so liable, if at all, to the uneven, jerky, or galloping motion that is experienced in most motor-cars; also, that in underground electric systems the connection between the wire and trolley in the conduit is always the same.

A motor-hanger may be bolted either overhead or between the bars D D. It is evident that many slight changes and alterations may be made in the relative construction and arrangement of parts without departing from the spirit of my invention, and hence I would have it understood that I do not confine myself strictly to the parts herein described; but

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

1. The combination, with the axle-box yoke, of a lever one end of which is pivoted near the end of the truck and adapted when its other end is released to swing down so as to

allow the journal-boxes to be removed, substantially as described.

2. A motor-truck frame having one end of each side bar bent into a yoke and extended down and bent at right angles into a lower horizontal plane than the frame proper, substantially as and for the purposes described.

3. In a motor-truck, the combination, with a forward frame consisting of bars, one end of each side bar bent into a yoke and extended down to a lower plane than the frame proper, of a bar or lever pivoted to said frame proper at one end and at its other secured to the lower extended end of the yoke, substantially as and for the purposes described.

4. In combination with the journal-boxes, the lower forward frames consisting of bars bent into a yoke in which said journal-boxes ride, one end of said yoke extended down to and bent at right angles in a lower horizontal plane than the frame proper, substantially as described.

5. In combination with the journal-boxes, the lower forward frames consisting of bars bent into a yoke and extended down to and bent at right angles in a lower horizontal plane than the frame proper, and the bars D connecting the said yokes.

6. In combination with the journal-boxes, the lower forward frames consisting of bars bent into a yoke and extended down to and bent at right angles in a lower horizontal plane than the frame proper, said journal-boxes riding in said yokes, the bar D, connecting said frames, and the bar C, having the stool O, all substantially as and for the purposes described.

7. In an anti-vibrating all-steel motor-truck, the combination, with the car-body and journal-boxes, of a frame having one end of each side bar bent into a yoke and extended down and bent at right angles in a lower horizontal plane than the frame proper, the bars D, connecting said frames, lever C, detachably connected to frame B, a stool on said lever C, and brake-hanger G, all substantially as and for the purposes set forth.

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

JAMES T. ROBINSON.

Witnesses:

H. C. DERN,

ALONZO D. HOUCK.