

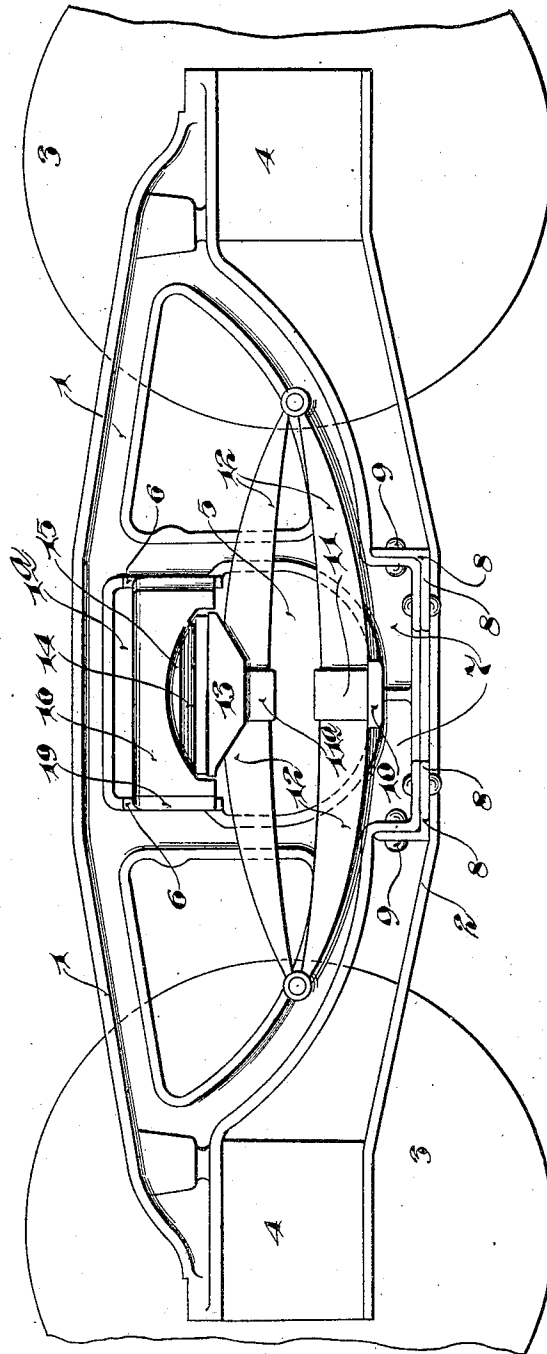
J. C. BARBER.  
CAR TRUCK.  
APPLICATION FILED SEPT. 12, 1910.

980,740.

Patented Jan. 3, 1911.

4 SHEETS—SHEET 1.

Fig. 1



Witnesses:  
E. C. Skinkle  
Harry Opsahl.

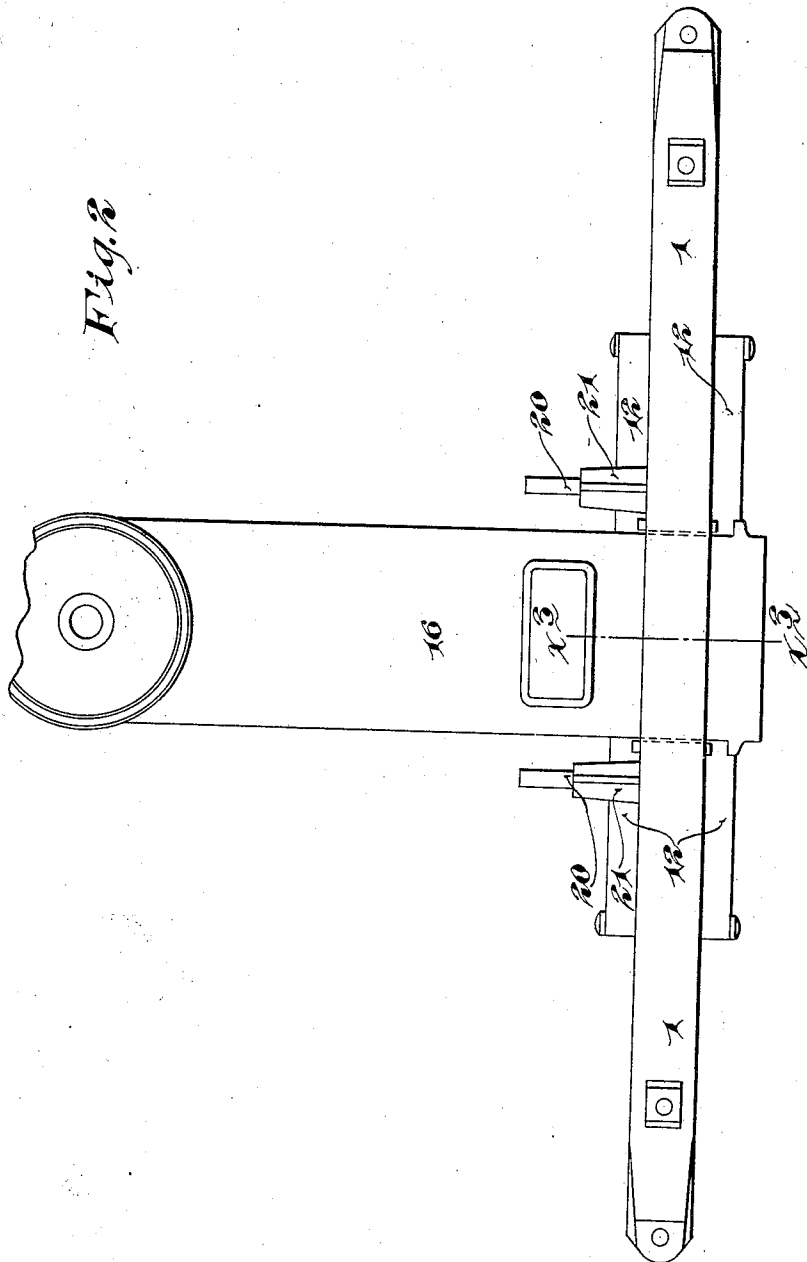
Inventor:  
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4 SHEETS—SHEET 2.



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*E. C. Skinkle*  
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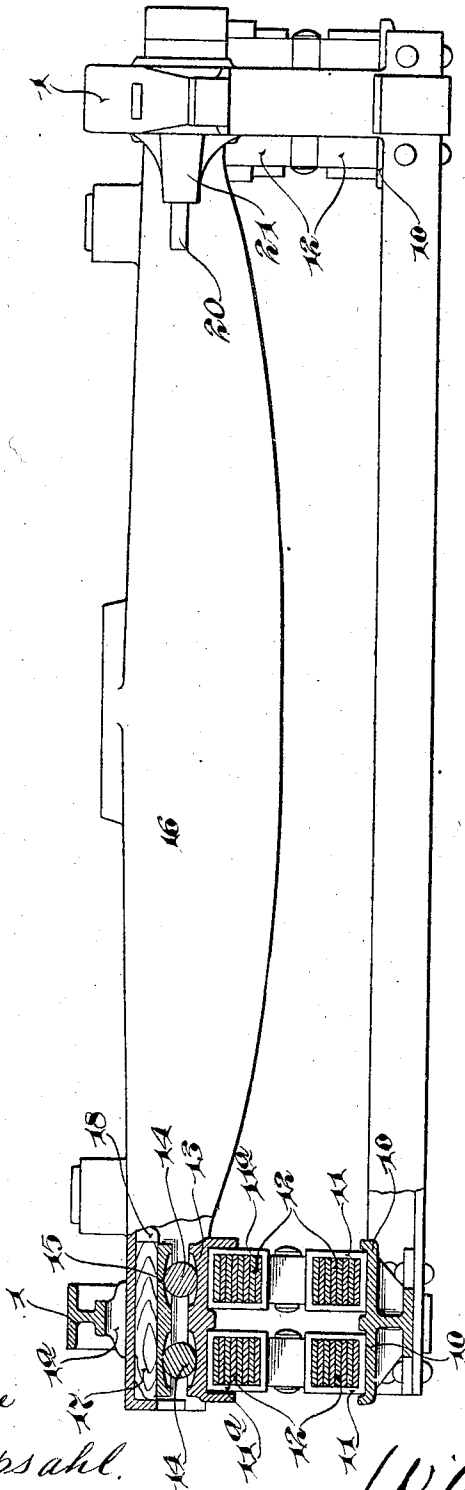
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4 SHEETS—SHEET 3.

Fig. 3



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4 SHEETS—SHEET 4.

Fig. 4

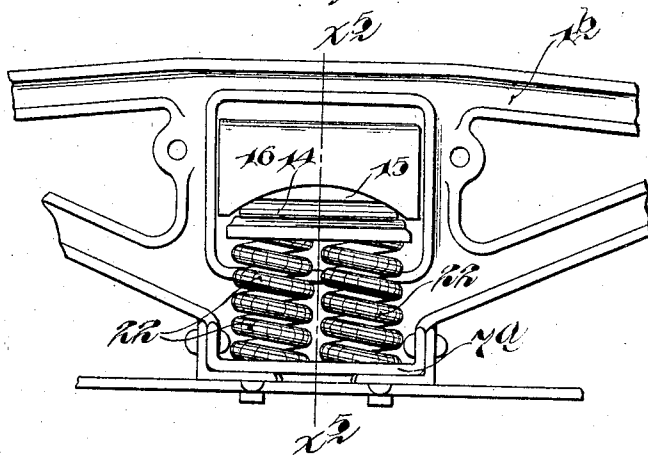
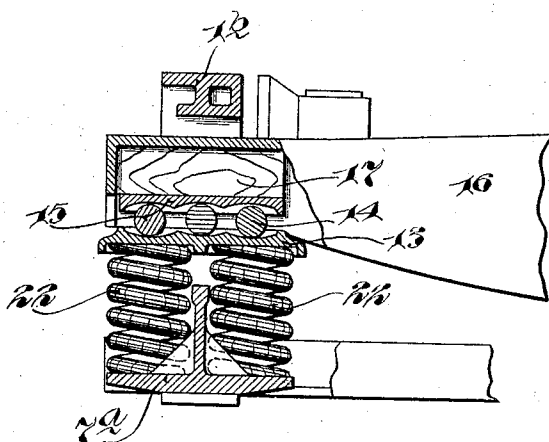


Fig 5



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN C. BARBER, OF CHICAGO, ILLINOIS, ASSIGNOR TO STANDARD CAR TRUCK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF NEW JERSEY.

CAR-TRUCK.

980,740.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed September 12, 1910. Serial No. 581,676.

*To all whom it may concern:*

Be it known that I, JOHN C. BARBER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, 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 has for its object to provide an improved car truck, and to this end the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings which illustrate the invention, like characters indicate like parts throughout the several views. Referring to the drawings; Figure 1 is a view in side elevation showing the improved truck, some parts being broken away and some parts being shown in diagram only; Fig. 2 is a plan view showing approximately one-half of the truck with the wheels and axles removed; Fig. 3 is a view chiefly in front elevation with some parts sectioned on the line  $x^3 x^3$  of Fig. 2; Fig. 4 is a fragmentary view in side elevation illustrating a slightly modified form of the truck; and Fig. 5 is a transverse vertical section taken on the line  $x^5 x^5$  of Fig. 4, some parts being shown in full.

The truck side frames are preferably in the form of steel castings 1 formed complete except for bottom tie bars 2 which are applied as preferably described. The truck wheels are indicated diagrammatically by the numeral 3 and the journal boxes are indicated diagrammatically by the numeral 4. Each side frame casting 1 is formed with an upper compression member, with lower or tension members and with longitudinally spaced vertically extended intermediate columns or struts, which latter are spaced apart to form bolster passages 1<sup>a</sup> in the upper portions of said side frames, and widened clearance passages 5 just below the latter. The upper portions of said columns, on their inner faces, are formed with bolster guiding surfaces 6. The central portions of the tension members of the side frames 1, are depressed to form angular portions 7, against which a pair of angular bar transoms or cross ties 8 are seated. The

various parts of the side frame castings 1 are preferably in the form of I-beams in cross sections so that they have projecting flanges both at the inner and outer sides of the vertical webs of said castings. The horizontal and vertical flanges of the transoms 8 are rigidly secured to the inner and outer flanges of the depressed frame section 7 by rivets 9. The reduced ends of the side frame castings 1 rest upon the top of the journal box 4 and are rigidly but detachably secured thereto and to the ends of the bottom tie bars 2, preferably by means of the customary box bolts, not shown. The lower or tension members of the said side frame castings 1 at their central portions are formed with inwardly and outwardly projecting shelves or flanges 10 having shallow seats in which the hubs 11 of elliptical springs 12 are seated. These elliptical springs 12 are extended longitudinally of the side frames and are thus arranged in pairs with one member of each pair adjacent to the outer side and the other adjacent to the inner side of each frame casting 1.

Combined spring caps and roller bases 13 are seated on the upper hubs 11<sup>a</sup> of each pair of springs 12. These are provided with concave seats in which rollers 14 are arranged to move transversely of the truck. Roller caps 15, having concave seats upon rollers 14 are connected to the ends of the truck bolster 16 for traveling movements therewith of the truck. Shimming blocks 17 are preferably interposed between the roller caps 15 and the ends of the bolster, and the said parts 15 and 17 are seated in the ends of the bolster, between the side flanges, the end flanges and internal lugs 18 of said bolster. This locates the lateral motion device entirely within the bolster. The ends of the side flanges of the bolster 16 work against the bolster guiding faces or surfaces 6 of the side frame castings 1, and the said bolster, as shown, is provided outward of said side frames with stop lugs or flanges 19 which limit the endwise movements of the bolster transversely of the truck.

The construction described gives a maximum rail clearance with a minimum height of frame. By reducing or removing the shimming blocks 17, the bolster may be lowered to a point where its center will allow only for the proper spring compression.

sure. The manner of connecting the transoms to the side frame castings gives very great strength, and a truck frame which may be very easily assembled, and hence, made at comparatively small cost.

To provide suitable bracket hangers, pins or studs 20 are secured to brackets 21 that are cast integral with the columns or strut forming portions of the side frame castings 1.

When the springs are removed the bolster may be rolled out of the bolster passages or seats 4 into the clearance passages 5 and then may be separated from the truck frame by endwise movement.

The construction illustrated in Figs. 4 and 5 is substantially like that illustrated in the other views, except that instead of each pair of elliptical springs a group of four coiled springs 22 is employed and these springs are arranged, two on the inner side and two on the outer side of each side frame casting 1<sup>b</sup> and are seated on the extended lower flanges of the depressed portion 7<sup>a</sup> of said side frame castings. In this modified construction the bolster, the combined spring caps and roller bases, the rollers, the roller caps and the shimming blocks are indicated by the same numerals as in Figs. 1, 2 and 3.

What I claim is:

1. In a car truck, the combination with side frames having their lower members formed with centrally depressed lower portions and with flanges following the lower portions of the said side members and depressed portions, of angle cross ties fitting the angular extremities of the said de-

pressed portions and directly riveted to the flanges thereof, substantially as described.

2. In a car truck, the combination with side frames having their lower members formed with centrally depressed lower portions and with flanges following the lower portions of the said side members and depressed portions, of angle cross ties fitting the angular extremities of the said depressed portions and directly riveted to the flanges thereof, bottom tie bars extended directly under the ends of said angle cross ties, and journal boxes secured between the ends of the said side frames and the ends of the coöperating bottom tie bars, substantially as described.

3. In a car truck, the combination with side frames having their lower members formed with centrally depressed lower portions and with flanges following the lower portions of the said side members and depressed portions, of angle cross ties fitting the angular extremities of the said depressed portions and directly riveted to the flanges thereof, the bottom members of said side frames having projecting spring supporting shelves located centrally of and just above the depressed portions, springs supported on said shelves, and a bolster guided by said side frames and supported by said springs, substantially as described.

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

JOHN C. BARBER.

Witnesses:

LEE W. BARBER,  
M. BELLE BARBER.