

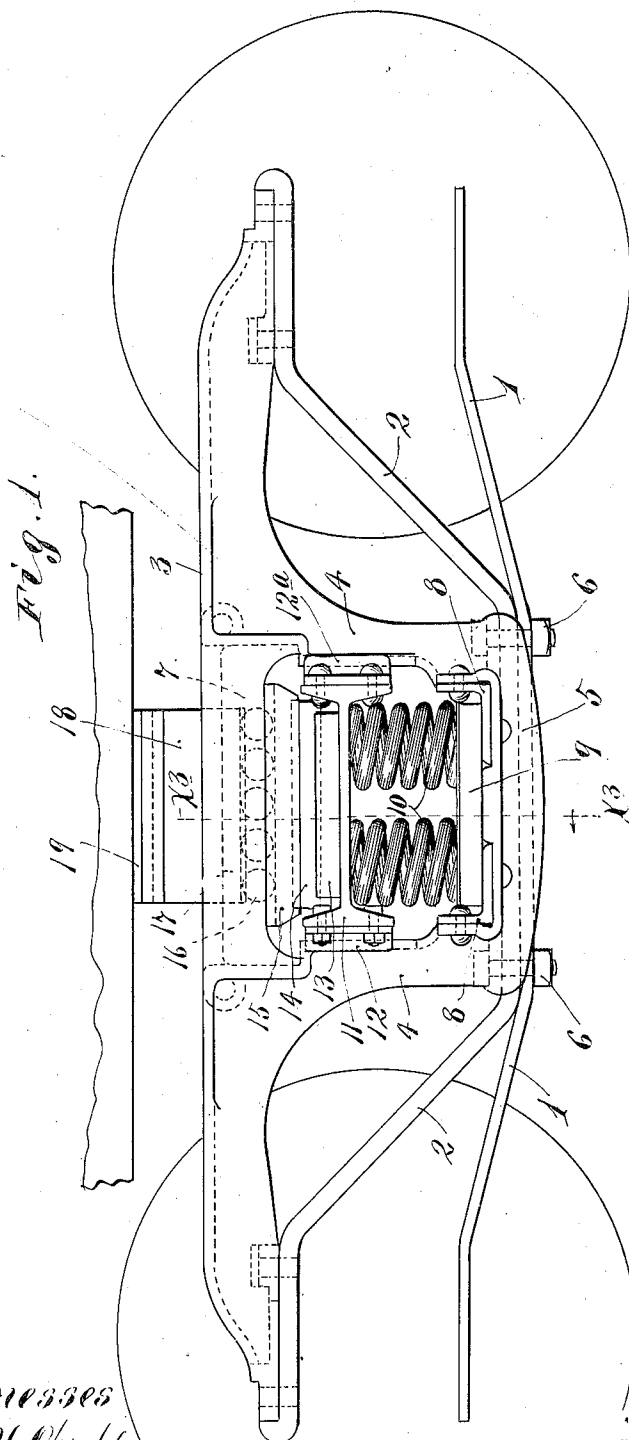
J. C. BARBER.
CAR TRUCK.

APPLICATION FILED JUNE 5, 1908.

Patented Dec. 7, 1909.

3 SHEETS—SHEET 1.

942,702.



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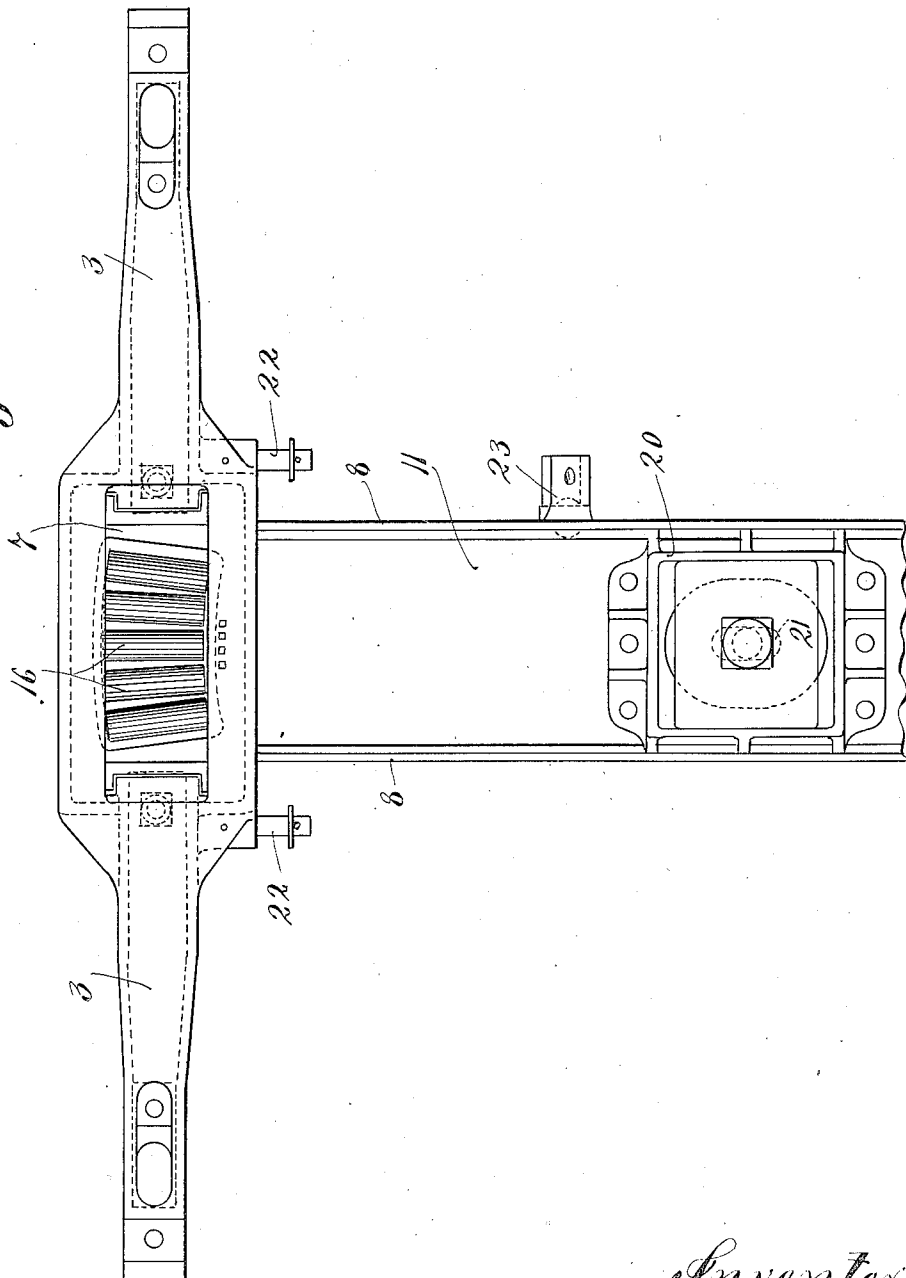
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3 SHEETS—SHEET 2.

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Fig. 2.



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3 SHEETS—SHEET 3.

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Fig. 3.

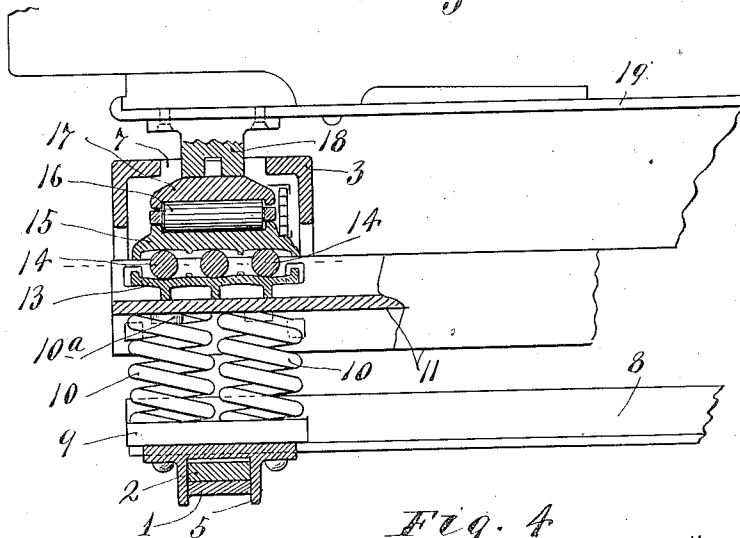


Fig. 4.

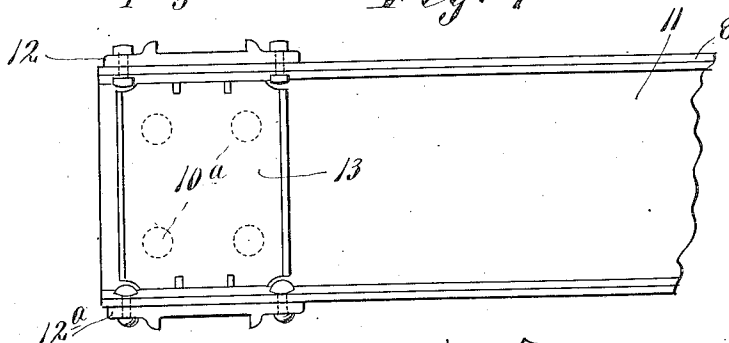
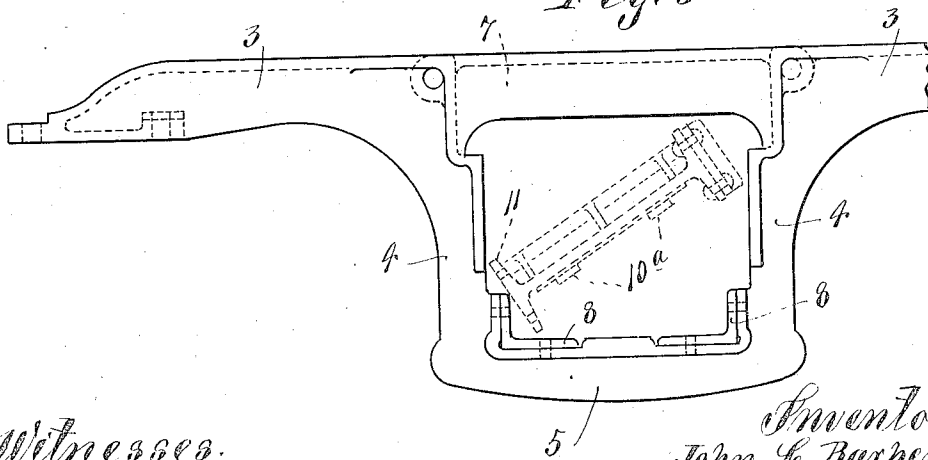


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CAR-TRUCK.

942,702.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed June 5, 1908. Serial No. 436,849.

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 relates to car trucks of the general design disclosed in my prior patent 863,012 of August 13, 1907, wherein the car body and its load are carried directly from the side frames of the truck through anti-friction devices affording provision for a limited lateral motion of the car body relative to the truck, in addition to the customary swiveling motion of said parts. The structure and mounting of the anti-friction devices, and the swiveling connections between the truck and the car body are substantially identical with those disclosed in my said prior patent.

My present invention has for its object to provide certain improvements in the side frames and the bolsters, with a view of securing greater convenience and efficiency in the cooperation of the said parts.

To these ends, my invention consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

The invention is illustrated in the accompanying drawings, wherein like references refer to like parts throughout the several views.

In said drawings; Figure 1 is a view of my improved truck, chiefly in end elevation, but with some parts shown in diagram lines only, and other parts broken away, and others removed. Fig. 2 is a plan view of a part of the truck, with some portions removed. Fig. 3 is a view partly in elevation and partly in vertical section on the line x^3 of Fig. 1. Fig. 4 is a view showing the bolster in plan, detached, with a portion of the same broken away; and Fig. 5 is a view showing the main part of one of the side frames, detached, in end elevation in respect to the trucks, with a portion broken away, and showing in dotted lines the position which the bolster takes in being inserted or removed from the bolster spaces.

The tie bar 1 and the lower arch bar 2 of

each side frame are substantially of the customary form. The top arch bar 3, the bolster columns 4, and the column base plate 5 are all formed integral with each other, preferably of cast steel, but may be made of pressed steel if so desired. The column base plate 5 is of saddle form in cross section so as to embrace the underlying portions of the tie bar 1 and the lower arch bar 2, and permit all the parts to be rigidly connected together by the bolts 6, as clearly shown in Fig. 1. The central portion of the top arch bar 3 is laterally expanded and provided with a central opening 7 of the proper size to permit the side bearings to work there-through, as will later more fully appear. Angle iron cross ties 8 are seated on the column base plates and rigidly secured to the base plates and to the column flanges, and serve to rigidly connect together the two side frames of the truck. On the horizontal flanges of the cross ties 8 rest suitable spring base plates 9 supporting the springs 10, suitably spaced in respect to each other. The bolster 11 is, as shown, composed of an ordinary steel I-bar, laid down flatwise, with the end portions of its horizontal web resting directly on the springs 10. The portions of the webs which so rest on the springs are thickened up and provided with suitable centering lugs 10^a for the springs, as shown in Fig. 3 and in dotted lines in Fig. 4. The space between the columns 4 is a little larger than the width of the bolster 11, and the bolster is provided with guide lugs, one set of which is marked with the numeral 12 and the other with the notation 12^a, which guide lugs embrace the guiding surfaces of the bolster columns 4 when the parts are in working position, as shown in Fig. 1, and cooperate with said columns to guide the bolster in its up and down motion while preventing any lateral motion thereof. At least one set of the bolster guide lugs are removably secured to the bolster. As shown, this is the set marked with the numeral 12. Hence, when the lugs 12 are removed from the body of the bolster 11, the bolster can be inserted in or removed from the spaces between the columns 4, with an endwise action, when the bolster is made to take a position between diagonally opposite corners of the bolster spaces, as shown in Fig. 5. It can then be turned down into its working position with the fixed set of guide lugs 12^a embracing the cooperating columns 4, and then

the other or removable set of guide lugs 12 can be applied and bolted fast in working position. After the bolster is thus put into position, the spring base plates 9 and springs 10 can be inserted by lifting up the bolster. Hence, these features of construction constitute a material improvement for convenience in assembling the working parts.

On the bolster 11, directly over the springs 10, are located roller bearing plates 13 which may be either cast solid with the bolster, or rigidly secured thereto in any suitable way. On the plates 13 are cylindrical rollers 14 extending crosswise of the bolster, and on the rollers 14 rest bearing plates 15; which said parts 13, 14 and 15 constitute the lateral motion anti-friction bearing devices. The plates 15 have on their faces rollers 16 arranged crosswise of the rollers 14 and radial to the swiveling center of the truck. On the rollers 16 rest plates 17 removably secured to depending lugs 18 fixed to the car body bolster 19. The parts 16, 17 and 18 constitute anti-friction side bearings supported from the cap plates 15 of the lateral motion bearing devices, with the depending lugs 18 from the body bolster 19 working through the top openings 7 of the top arch bars 3, these openings being long enough to permit the necessary travel of the side bearings under the radial or swiveling motion of the car body and the truck relative to each other.

The truck bolster 11 is provided with a lower member 20 of a suitable pair of center plates, the other member of which is not shown, but would be connected to the body bolster 19 in the customary way. These center plates may be constructed and fitted together with buffer blocks located between the telescoping parts of the two plates, so as

to make the same cooperate to take the forward and backward thrusts regardless of the position which the car body may occupy relative to the bolster of the truck under the lateral motion permitted by the anti-friction devices; and to this end, the center plate member fixed to the truck bolster 11 has an elongated slot 21 to permit the lateral travel of the king pin connecting the truck and the car body—all as fully illustrated and described in my said prior patent 863,012.

The numerals 22 in Fig. 2, represent brake hanger bearing stud shafts, and the numeral 23 represents a bracket fixed to one of the cross ties or transoms 8 for supporting the pivoted brake lever, not shown.

What I claim is:—

In a car truck, the combination with side frames having bolster columns, of a bolster body in the form of an I-beam of less width than the space between said columns and provided with independent guide lugs, the guide lugs on one side of the bolster being permanently riveted to the flanges thereof, and the guide lugs on the other side of said bolster being detachably secured thereto by rigid bolts passed through the flanges thereof and through the said detachable guide lugs, and said side frames having openings from which the bolster may be removed endwise when said removable guide lugs are detached and said bolster is turned laterally to an oblique position, substantially as described.

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

JOHN C. BARBER.

Witnesses:

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EDWIN W. WEBB.