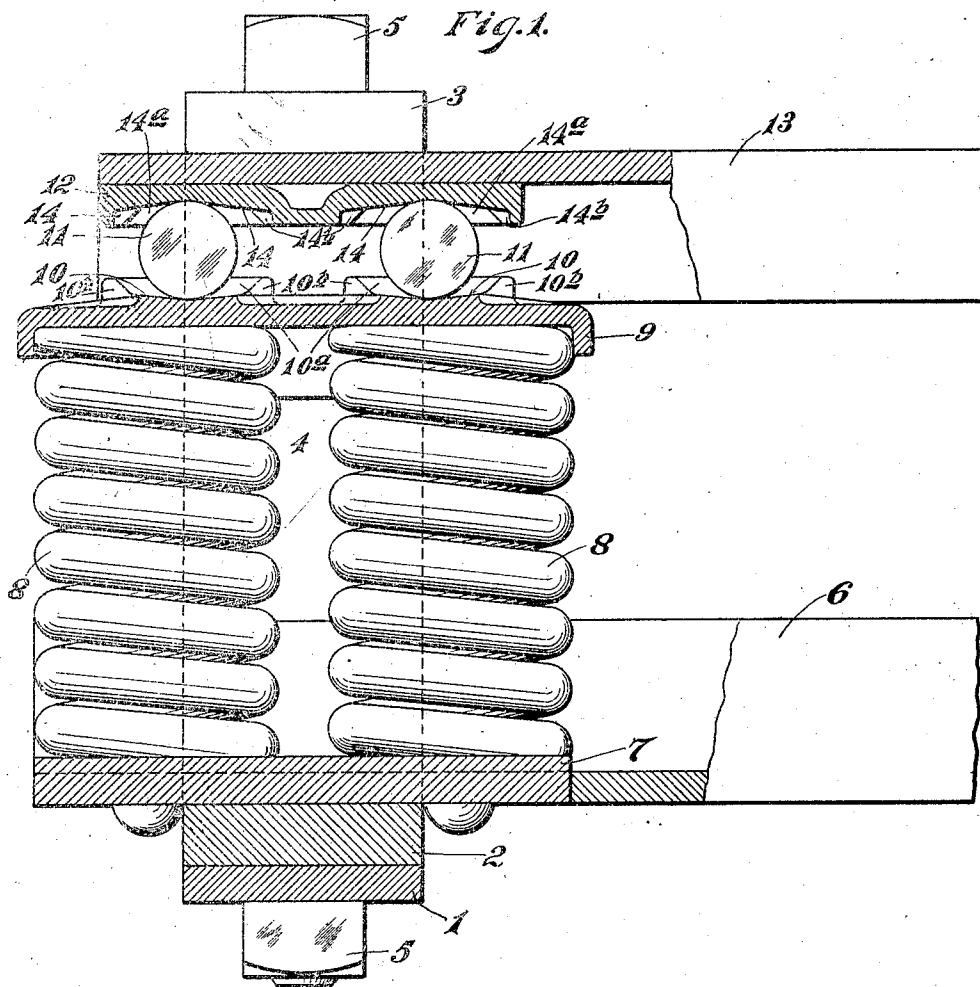


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 LATERAL MOTION ROLLER BEARING DEVICE FOR CAR TRUCKS.
 APPLICATION FILED APR. 16, 1908.

937,752.

Patented Oct. 26, 1909.
 2 SHEETS—SHEET 1.



Witnesses:
 W. H. Souza.
 Harry Opsahl.

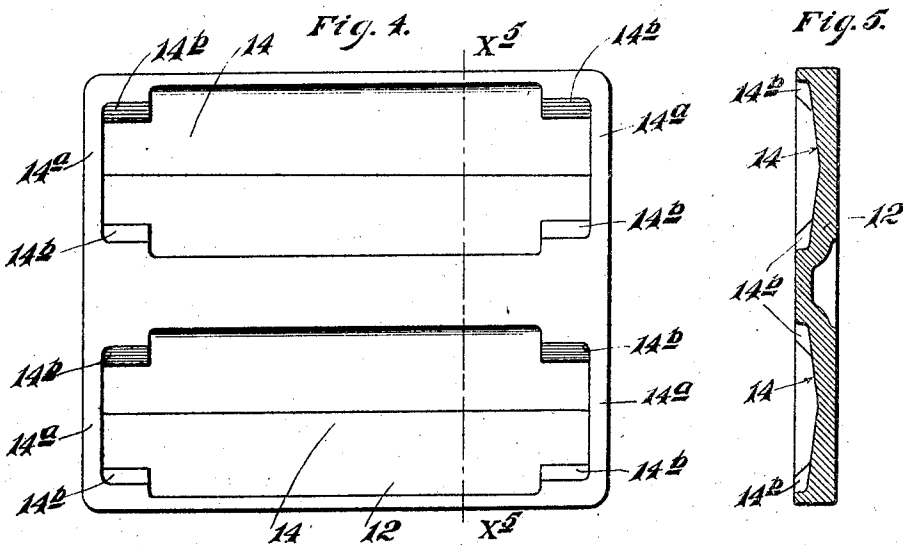
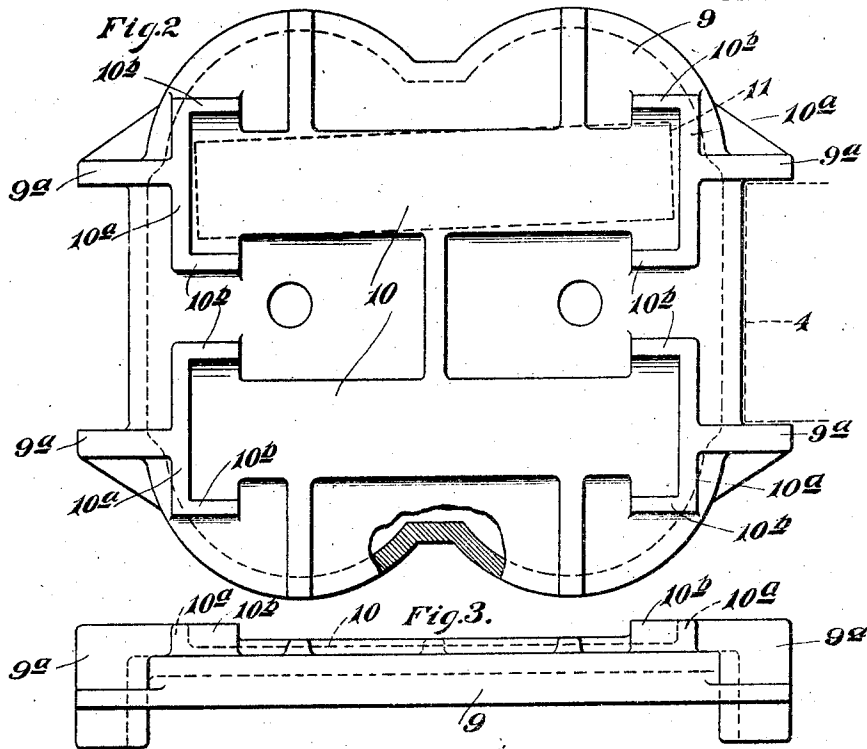
Inventor:
 J. C. Barber.
 By his Attorneys:
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UNITED STATES PATENT OFFICE.

JOHN C. BARBER, OF CHICAGO, ILLINOIS.

LATERAL-MOTION ROLLER-BEARING DEVICE FOR CAR-TRUCKS.

937,752.

Specification of Letters Patent.

Patented Oct. 26, 1909.

Application filed April 16, 1908. Serial No. 427,461.

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 Lateral-Motion Roller-Bearing Devices for 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.

Especially my invention relates to car trucks of the general type disclosed in my prior patent #875,566, issued of date December 31, 1907, entitled car truck, and relates to the improvement of the roller bearing devices for permitting lateral movements of the car body in respect to the car truck. More particularly stated, in the type of lateral motion car truck above indicated, the truck bolster is mounted for endwise movement transversely of the car truck and is supported by rollers that are interposed between the bearings on the ends of said truck bolster and on an underlying combined spring cap and roller base; and the present invention relates particularly to the improvement of the roller engaging bearings that overlie and underlie the bolster supporting rollers.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Referring to these drawings, Figure 1 is a view chiefly in transverse vertical section taken through one of the truck side frames and associated parts and illustrating my improved lateral motion bearing device applied in working position. Fig. 2 is a plan view showing, in detail, one of the combined spring caps and roller bases removed from working position, some parts being broken away. Fig. 3 is an edge elevation of the combined spring cap and roller base shown in detail in Fig. 2. Fig. 4 is a bottom plan view of the roller cap; and Fig. 5 is a section taken on the line x^x of Fig. 4.

In the drawings the numeral 1 indicates the bottom tie bar, the numeral 2 the bottom arch bar, the numeral 3 the top arch bar, and the numeral 4 the bolster columns, all rigidly connected by nutted column bolts 5 and constituting one of the side frames of the truck. The opposite side frames (only one of which is shown in the drawings) are connected by

cross ties or transoms 6, the opposite ends of which are riveted or otherwise rigidly secured to the opposite pairs of bolster columns. A base plate 7 for the bolster springs 8 is riveted or otherwise rigidly secured to the horizontal flanges of the cross tie bars 6 and is located between the cooperating pair of bolster columns 4.

A plate 9 that constitutes a combined spring cap roller base is seated on the upper ends of the four springs 8, and this plate is provided with a down-turned flange that embraces the upper ends of the said springs and prevents lateral movement thereof. On its upper face the plate 9 is formed with parallel roller seats 10 upon which bearing rollers 11 are placed. Another roller bearing plate 12, designated as a roller cap, is rigidly secured to the adjacent end of the truck bolster 13 and is provided with roller seats 14 that directly engage and rest upon the rollers 11. The seats 10 of the plate 9 are provided with end flanges 10^a and the seats 14 of the roller cap 12 are provided with corresponding end flanges 14^a, which end flanges hold the rollers 11 against endwise movements. At its ends the plate 9, or so-called combined spring cap and roller base, is provided with projecting laterally spaced guide lugs 9^a that embrace the bolster columns 4 and guide the said plate 9 for true vertical movements on said columns under the yielding action of the springs.

The roller seats 10 and 14 are concave in a direction transversely of the truck and this concavity is preferably afforded by flat bearing surfaces that diverge from central longitudinal lines of the said seats. The end flanges 10^a of the lower seats 10 are provided with inwardly extended beveled stop lugs or surfaces 10^b; and the end flanges 14^a are provided with inwardly projected beveled stop lugs 14^b. The bearing surfaces of the lower seats 10 are of considerably less width than the distance between the pairs of stop lugs 10^b, while the bearing surfaces of the upper seats 14 are considerably wider than the distance between the upper pairs of stop lugs 14^b. With this arrangement, under extreme lateral movements of the car body in respect to the truck, or vice versa, the ends only of the rollers will be brought into engagement with the beveled stop lugs 10^b and 14^b of the bearing plates 10 and 14, respectively; and, by this action, the rollers which will frequently work into

oblique positions, indicated by dotted lines in Fig. 2, will be thrown into parallel alignment with each other and with the longitudinal axes of the seats 10 and 14. Furthermore, the intermediate portions of the seats 10 are extended only as far as necessary to afford complete supports for the rollers when they are in extreme positions, and are then cut away so that there is the best possible chance for the escape of all dirt from the bearing surfaces. The above described arrangement of the roller seats and laterally spaced stop lugs at the extremity thereof is, therefore, of great importance in the practical operation of these lateral motion bearings.

So far as the present invention is concerned it is immaterial whether or not the anti-friction side bearings shown in my said prior patent be employed. Furthermore, the improved form of roller bearing seats above described may be employed in various other arrangements of anti-friction lateral

motion devices than the one above specifically described.

What I claim is:

In a car truck, an anti-friction lateral motion device comprising upper and lower bearing plates or members and interposed cylindrical rollers, said bearing plates having concave roller seats with end flanges and laterally spaced stop shoulders that are engageable with the end portions of said rollers to align the same under extreme movements of said bearing plates in respect to each other, the lower of said bearing plates being cut down approximately to the bases of the top shoulders of the said lower bearing plate to permit ready escape of dirt from the bearing, substantially as described.

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

JOHN C. BARBER.

Witnesses:

L. W. BARBER,
E. W. WEBB.