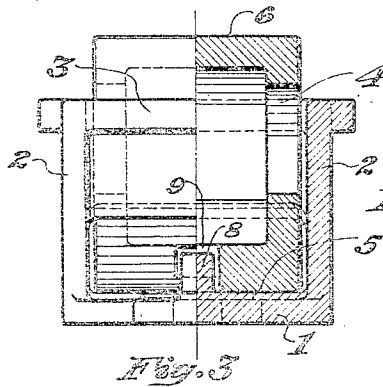
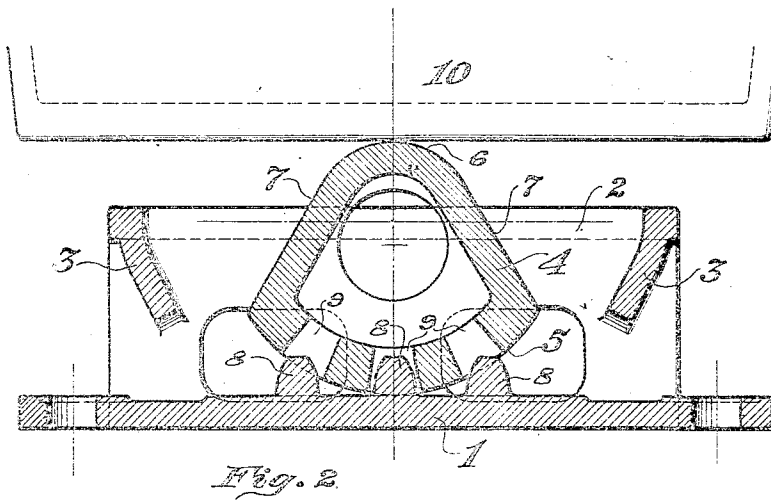
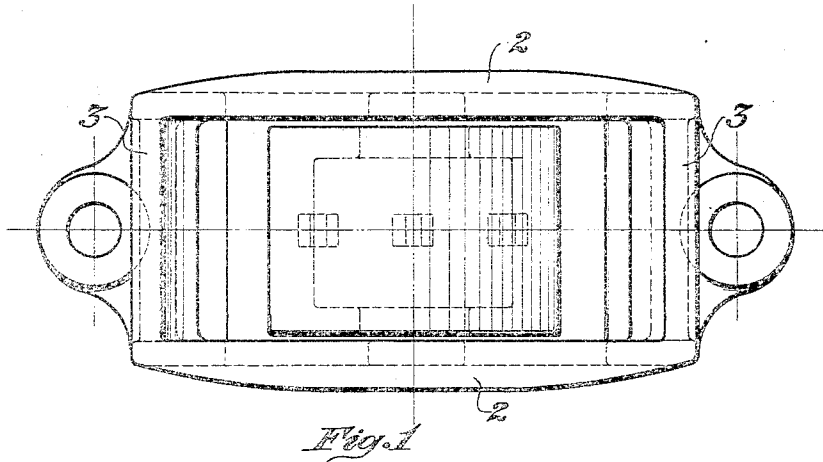


W. E. WINE.
 SIDE BEARING FOR RAILWAY CARS.
 APPLICATION FILED NOV. 5, 1912.

1,114,214.

Patented Oct. 20, 1914.
 3 SHEETS—SHEET 1.



Witnesses:

R. Hunt.

H. L. Grant Jr.

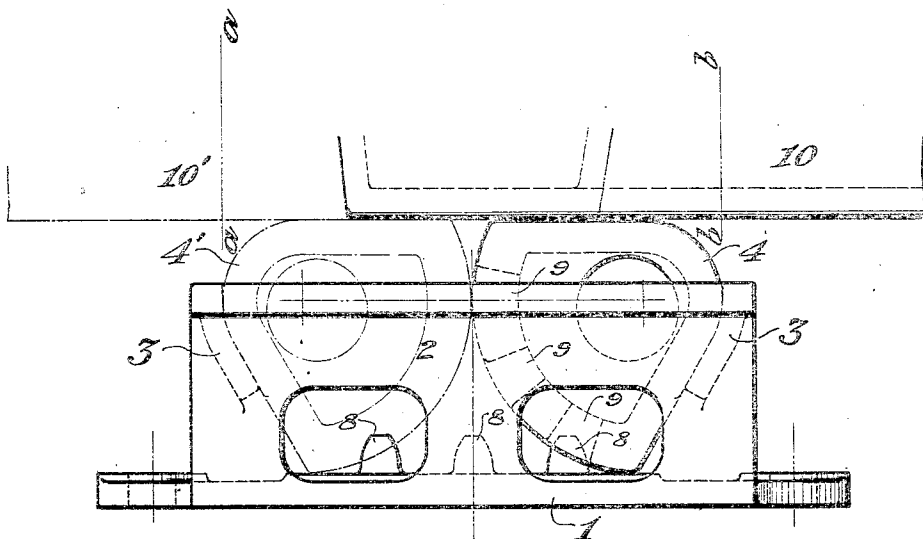
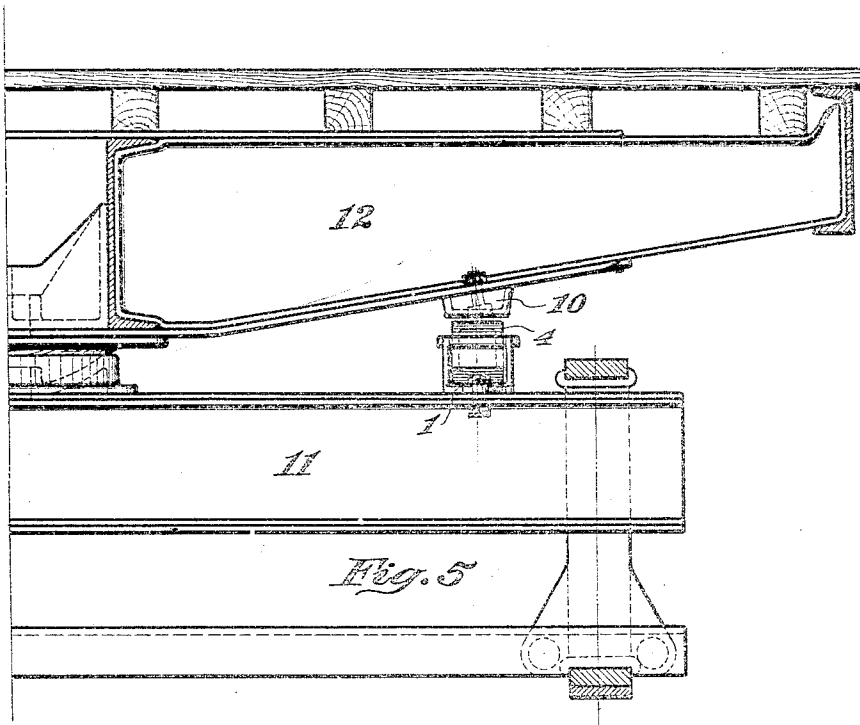
Inventor:

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Fig. 4

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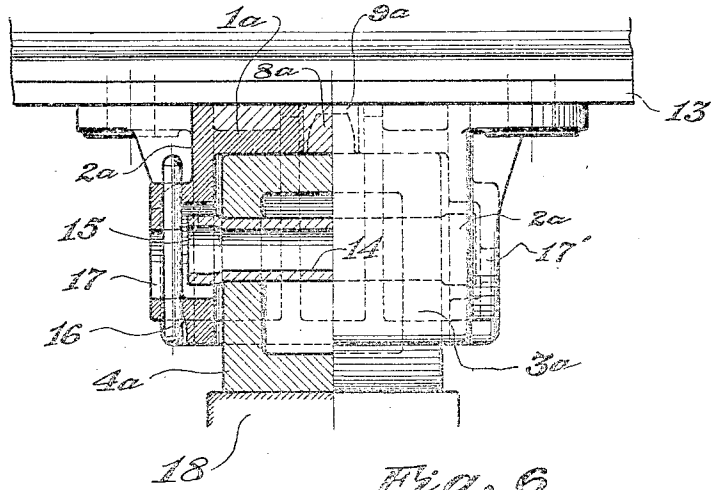


Fig. 6

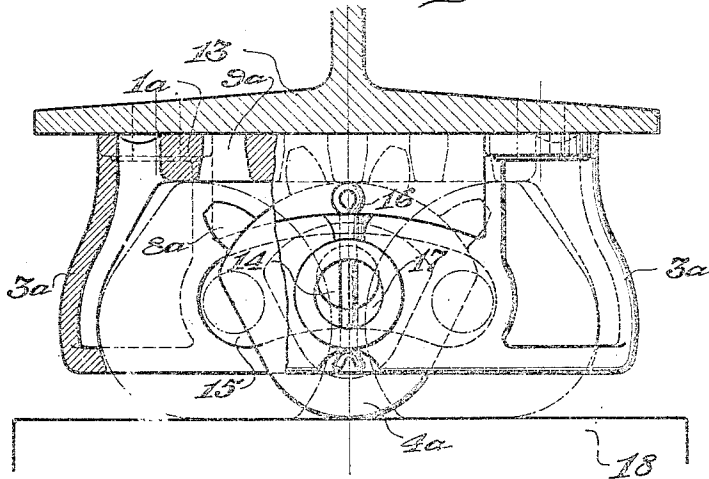


Fig. 7

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UNITED STATES PATENT OFFICE.

WILLIAM E. WINE, OF WILMINGTON, NORTH CAROLINA.

SIDE BEARING FOR RAILWAY-CARS.

1,114,214.

Specification of Letters Patent.

Patented Oct. 20, 1914.

Application filed November 5, 1912. Serial No. 729,684.

To all whom it may concern:

Be it known that I, WILLIAM E. WINE, a citizen of the United States, residing at Wilmington, in the county of New Hanover and State of North Carolina, have invented certain new and useful Improvements in Side Bearings for Railway-Cars, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in roller side-bearings for railway cars.

Side-bearings in general of the class herein described consist of numerous parts and are a constant source of trouble and expense to maintain in proper working condition. Some of the more simple designs use rollers which, when the roller has traveled to the end of its movement and there is still further deflection of the truck with respect to the body of the car, it becomes necessary for the roller to slide causing flat spots on the rolling surface which are very objectionable as the side-bearing cannot work favorably under such conditions.

Therefore the object of my invention is to provide a side-bearing of simple, strong and durable construction, that will yield freely with the movement between the car body and the truck, and of such shape that wear on its contact surfaces does not alter its shape and usefulness.

With these and other objects hereinafter explained in view my invention consists in the construction and combination of elements hereinafter described and claimed.

In the accompanying drawings which illustrate the preferred embodiment of my invention: Figure 1 is a plan view of a side-bearing embodying my invention applied as a truck side-bearing, Fig. 2 is a section of same showing the body side-bearing in contact with the roller in its central position, Fig. 3 is a part end view and part cross section of same, Fig. 4 is a side view showing the roller in its extreme positions, Fig. 5 shows a part section of a car having a side-bearing embodying my invention applied to its truck bolster, Fig. 6 shows a side bearing embodying my invention for application to a body bolster of a car, partly in cross section and partly an end view, Fig. 7 shows a part side view and part longitudinal section of same.

Similar characters designate similar parts throughout the several figures of the drawings.

Referring now to the parts by number, 1 is a bearing plate of a side-bearing and is provided with sides 2 and end stops or cross bars 3 forming a housing in which is located a special roller 4. The roller 4 is provided with a lower rolling surface 5, an upper rolling surface 6 and inclined sides 7, the lower rolling surface being of greater radius than the upper rolling surface, thus causing the roller to center itself by gravity: In order that the roller 4 may always be in proper position on plate 1, the plate is provided with teeth or projections 8 which are adapted to enter recesses 9 in the lower part of the roller. The arrangement of teeth and recesses may be reversed by having the teeth on the roller and the recesses in the plate without affecting their function and intent of their purpose.

The portion of the car body known as the body side-bearing and which is intermittently in contact with roller 4 is shown as 10, has a longitudinal movement with respect to plate 1.

In Fig. 4 the roller is shown in full lines in its extreme right hand position and in dotted lines as 4' in its extreme left hand position, 10 and 10' representing the corresponding positions of the body side-bearing. The distance between lines *a-a* and *b-b* represent the full movement of the body side-bearing due to the rolling action of the roller 4. It will be noted that the roller has another important function which is, when it is at either of its extreme positions one of the flat surfaces 7 is parallel with the lower surface of the body side-bearing, upon which the flat surface will slide in case of further movement. From the foregoing description it will be seen that this side-bearing can be designed for average conditions of travel only and allow the sliding feature to take care of the maximum or unusual movement, thereby reducing the size and weight of parts to a minimum and simplifying the construction.

In Fig. 5 is shown a side-bearing of this invention as it actually appears applied to a truck bolster of a railway flat car in its normal position. The plate 1 is bolted to the top of a truck bolster 11 and the body side-bearing 10 is bolted to the body bolster 12 in such a manner as to provide a small space between the body side-bearing 10 and the roller 4 when the car is standing normal.

In Figs. 6 and 7 it will be noted that the housing formed by bottom plate 1^a, sides 2^a

and ends 3^a is so constructed as to receive and retain therein the roller 4^a and is shown attached to a portion 13 of a body bolster.

The roller 4^a is provided with a removable pin 14 which projects through each side of the roller into the recesses 15 in the sides 2^a of the housing, forming trunnions which retain the roller within the housing and the teeth 8^a in operative communication with recesses 9^a. The removable pin 14 is here shown expanded at each end in order to keep it in position within the roller, but in case the pin 14 becomes loose in the roller it will be held therein by the pin 16 extending across the hole 17. The hole 17 is made sufficiently large to readily admit the pin 14 but 17' is only of sufficient size to admit an instrument for ejecting pin 14 through hole 17. The recesses 15 provide both vertical and horizontal clearance for the trunnions of pin 14 so that the roller may rest on the truck side-bearing 18 under all normal conditions and be free to move horizontally.

Having thus described my invention, what I claim is:

1. In a side-bearing the combination with a bearing plate provided with side walls, of a roller engaging said bearing plate and provided with inclined flat surfaces, means for guiding the roller, comprising interengaging parts on the roller and the bearing plate, and means for stopping the roller in position with a flat surface parallel with the bearing plate.

2. In a side-bearing, the combination with a bearing plate, of a roller having an upper rolling surface and a lower rolling surface and inclined flat surfaces tangent to one of the rolling surfaces, and means for stopping the roller in position with an inclined surface parallel with the bearing plate, comprising engaging parts on the roller and bearing plate.

3. In a side-bearing, the combination with a bearing plate, of a roller having upper and lower rolling surfaces and inclined flat surfaces tangent to the rolling surface opposite said bearing plate, means for holding the roller in operative position on the bearing plate, and means for stopping the roller in position with an inclined surface parallel with the bearing plate, comprising engaging parts on the roller and bearing plate.

4. In a side-bearing, the combination with a housing provided with a bearing plate therein, of a roller engaging said bearing plate and provided with inclined surfaces, and means for guiding the roller, comprising interengaging parts on the roller and the bearing plate, the end walls of the housing being adapted to stop the roller with an inclined side parallel with said bearing plate.

5. In a side-bearing, the combination with an upper bearing member and a lower bearing member, of a roller engaging said bearing members and provided with inclined flat sides and means for guiding said roller, comprising interengaging parts on the roller and one of said bearing plates, one of said bearing members being provided with means for limiting the movement of the roller, comprising stops adapted to stop the roller in either of its extreme positions with a flat side parallel with one of said bearing members said roller having an unchanged rolling contact with one of said bearing members.

6. In a side-bearing, the combination with a bearing plate having side walls thereon, of a roller provided with flat surfaces and so cooperating with the bearing plate that the flat surfaces form sliding surfaces when at either of its extreme positions, stops for limiting the movement of the roller and means for guiding the roller, comprising interengaging parts on said roller and said bearing plate, said stops being adapted to stop the roller in either of its extreme positions with a flat side parallel with said bearing plate.

7. In a side-bearing, the combination with a bearing plate having side walls thereon, of a roller provided with inclined flat sides and so cooperating with the bearing plate that the flat sides form a sliding surface at either of its extreme positions, stops for limiting the movement of the roller and means for guiding the roller comprising teeth on said bearing plate engaging teeth within the lower rolling surface of the roller, said stops being adapted to stop the roller in either of its extreme positions with a flat side parallel with said bearing plate.

8. In a side-bearing, the combination with a housing having a bearing plate therein, of a roller provided with a lower rolling surface, an upper rolling surface and inclined sides, so cooperating with said bearing plate that the inclined sides form a sliding surface when at either of its extreme positions, the ends of said housing forming stops for limiting the movement of said roller and guiding means for said roller comprising teeth in said roller engaging teeth within the housing, said stops being adapted to stop the roller in either of its extreme positions with a flat side parallel with said bearing plate.

Signed and witnessed this 11th day of 120 Sept. 1912.

W. E. WINE.

Witnesses:

A. K. MOORE,

J. A. FOUNTAIN.