

J. McC. COLEMAN.
 ROLLER SIDE BEARING.
 APPLICATION FILED MAY 5, 1909.

935,893.

Patented Oct. 5, 1909.

Fig. 1.

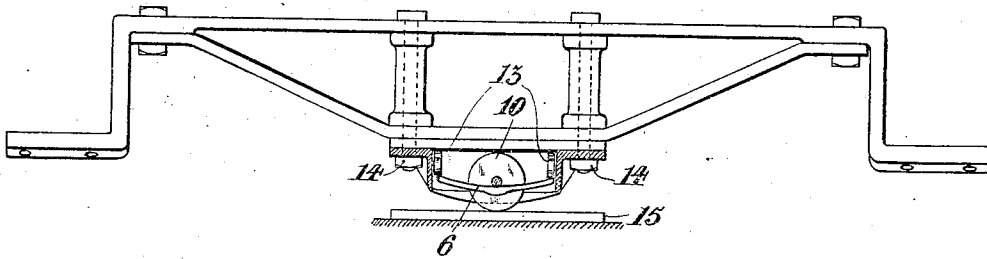


Fig. 2.

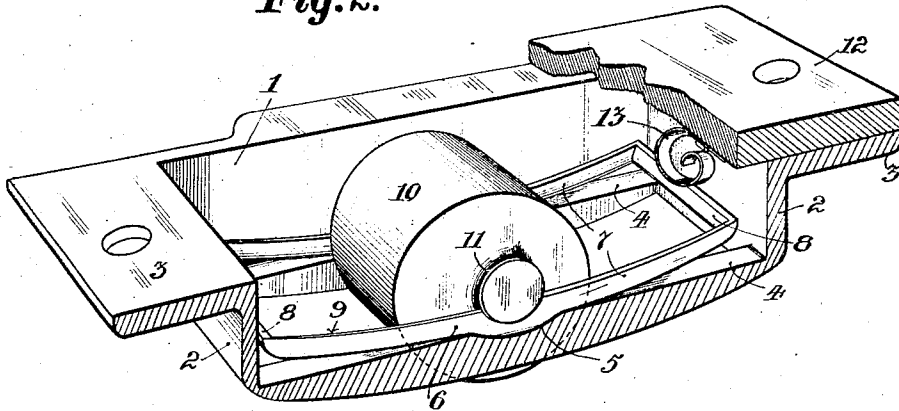
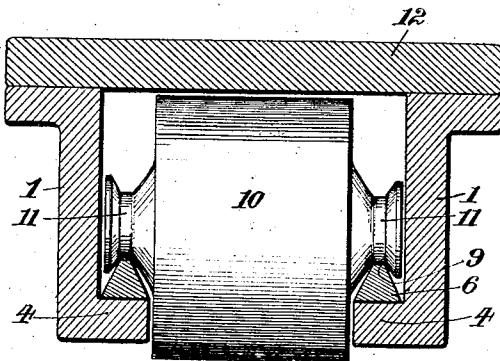


Fig. 3.



Witnesses.
Harry Davis.
E. H. Presidden.

Inventor.
J. McC. Coleman.
 by *E. E. Johnston*
 Atty

UNITED STATES PATENT OFFICE.

JAMES McCUTCHEON COLEMAN, OF ST. LAMBERT, QUEBEC, CANADA.

ROLLER SIDE BEARING.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES McCUTCHEON COLEMAN, resident of the town of St. Lambert, in the Province of Quebec, in the Dominion of Canada, a citizen of the United States of America, have invented certain new and useful Improvements in Roller Side Bearings; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to improvements in roller side bearings, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel construction and arrangement of parts whereby the roller of the bearing automatically centers itself at the raising of the car body by means of a member independent of the casing.

The objects of the invention are to devise a roller side bearing in railway car construction which will relieve the grind incident to plate bearings and always return to position for rolling immediately on the release of pressure and generally to provide a simple, cheap and effective bearing.

In the drawings, Figure 1 is a longitudinal sectional view of the device showing it secured to a bar bolster and the roller engaging the plate bearing the truck. Fig. 2 is an enlarged sectional perspective view showing the cover broken away to disclose the interior. Fig. 3 is an enlarged cross sectional view.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 1 are the sides of the casing, 2 the ends, 3 the flanges extending from said ends, and 4 ledges extending inwardly from the bottom of said sides, said ledges and sides being formed underneath in arc-shape longitudinally.

5 are arc-shaped slots centrally arranged opposite one to the other in the ledges 4.

6 is a rocker having correspondingly arc-shaped bosses extending into the arc-shaped slots 5, said rocker being formed of sides 7 and the ends 8 and rocking within said casing on said ledges. The sides of said rocker are inverted V shape to form the track 9.

10 is a roller having the trunnions 11 hav-

ing reduced portions and adapted to travel on the track 9.

12 is the cover of the casing resting on the flanges 3 and sides 1. 13 are springs secured to the underside of said cover adjacent to the inner end walls and engaging the ends 8 of the rocker 6.

14 are bolts securing the parts together and to the bolster of the car.

15 is the plate secured to the truck of the car and on which said roller 10 travels.

In the operation of this device, the body of the car swinging from side to side, as it constantly does in going around curves or from any other disturbance, comes in contact with the top of the truck where heretofore other forms of plate and roller bearings have been used. The roller bearing secured to the bolster comes in contact with the plate of the truck with the consequence that the said roller rolls to the limit of its travel in the opening through the bottom of the casing, that is to say, the roller rolls from the center to one or other of the ends of the casing.

It is necessary in the further operation of this device to bring the roller to the center of the casing after the release of pressure from above and in order to do this, there must be an inclined track within the casing, so that the roller will come back, this inclined track is provided by the rocker 6, which is controlled by the springs 13, for when the roller rolls to one end of the casing, the spring at one end is compressed by an end 8 of said rocker, but immediately the pressure on the roller is released by the raising of the car body, the spring which has been compressed forces that end of the rocker to its normal position with the result that the roller being quite free, runs back to its central position without interference. In other words, the rocker when no pressure is brought on the roller is always retained in its balanced position by the springs 13.

It will be noticed that the roller continuously travels in the same plane as long as pressure is relieved therefrom, and a very small fraction of an inch play is necessary to bring the roller into service for the support of the car body and in returning the said roller to center, it does not make any difference what cant the car body has, for the rocker will bring it back no matter what the

position of the casing may be, and this, as far as I am aware, is not so with any other form of roller bearing.

What I claim as my invention is:

5 1. In a roller side bearing, an open frame having rocker shaped side bars, a roller having trunnions traveling on said side bars, a casing adapted to contain and support said rocker frame, and means for resiliently holding said frame in a balanced position.

10 2. In a roller side bearing, a casing open at the bottom and having supports extending inwardly from the sides adjacent to said bottom, a rectangular open frame in rocker form adapted to rock on said supports, a roller having trunnions traveling on the side bars of said frame, a cover closing in the top of said casing and resilient means secured to said cover and engaging the end bars of said open frame.

15 3. In a roller side bearing, a casing adapted to be secured to the bolster of a car body, a roller having suitable trunnions and normally extending through the open bottom of

said casing, rocker arms forming tracks for said trunnions and suitably supported and held to a balanced position within said casing, and a plate on the truck bolster below said roller.

4. In a roller side bearing, a casing having ledges extending inwardly from the bottom of its sides, a rocker having ends and sides, the latter rocking on said ledges and being formed in inverted V shape, a roller having bearings extending centrally from the sides thereof and traveling on tracks formed by said sides of the rocker, a cover closing in said casing and springs secured to said cover and engaging the ends of said rocker.

Signed at the city and district of Montreal, Quebec, Canada, this 27th day of April, 1909.

JAMES McCUTCHEON COLEMAN.

Witnesses:

G. H. TRESIDDER.

P. SHEE.