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Fig. 3.

18 28 32 27 19 24 4 20 15 16 27 28 23 25 30 14 10 13 26 4

WITNESSES:

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UNITED STATES PATENT OFFICE.

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SIDE BEARING FOR RAILWAY-CARS.

1,295,054.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN F. O'CONNOR, a citizen of the United States, residing at the city of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Side Bearings for Railway-Cars, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

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

The object of my invention is to provide an adjustable side bearing of simple construction and efficient operation.

In the drawings forming a part of this specification, Figure 1 is an end view of my improved side bearing mounted between a truck and body-bolster of a railway car,—only a portion of the bolsters being shown in the drawing. Fig. 2 is an enlarged plan view of the bearing. Fig. 3 is an enlarged longitudinal vertical section taken on line 3—3 of Fig. 1. Fig. 4 is a cross section taken on line 4—4 of Fig. 3. Fig. 5 is a plan view of a modification.

Referring to the drawings, the numeral 6 indicates a body-bolster of a railway car, substantially one-half of the bolster being shown in the drawing, the said bolster having mounted thereon a bearing plate 7. My improved side bearing 8 is provided with a base member 9 which has flanges 10 appropriately perforated as at 11 for the passage of rivets 12 or their securing means which engage it to the truck-bolster 13, only a portion of which is shown in the drawing. The base member 9 is provided intermediate its ends with an upstanding post 14 provided with a rounded end 15 which in preferable construction presents a convex surface 16 in longitudinal section, as shown in Fig. 3, and a similar convex surface 17 in cross section, as shown in Fig. 4. A cradle 18 is provided intermediate its ends with a concaved bearing member 19 which is mounted upon the rounded end 15 of the post 14 and is provided with the perforation 20 registering with a perforation 21 in the post 14 for the passage of the retaining bolt 22. The said bolt has a head

23 which is countersunk in the bearing member as at 24, and a nut 25 which is countersunk in the base member as at 26. The perforations 20 in the bearing member and 21 in the post are of a diameter sufficiently larger than the diameter of the bolt to permit the oscillation of the cradle upon the post in both longitudinal and transverse directions. The cradle 18 is provided at either side of the bearing member 19 with the vertical roller-receiving recesses 27—27, in each of which is mounted a roller 28, the said rollers being of a general cylindrical shape and being provided with the apertures 29, each for the passage of an axle 30. The axles 30 are provided each at one end with a perforation 31 for the passage of a cotter 32, and at their other ends are joined by the integral member 33 which with a pair of axles forms a U-shaped roller supporting bolt which in its entirety I designate by the numeral 34.

In Fig. 5 a modification is illustrated, the base member being indicated at the numeral 40 and having suitable flanges 41 for the passage of the rivets 42 to secure it to the bolster. The base member is provided with the center post 43 upon which the cradle 44 is adapted to oscillate in either direction. It is provided with the retaining bolt 45 which passes through the cradle and secures it to the base member. The cradle also is provided with the roll-receiving chambers 46—46, in each of which is mounted a roller 47, the rollers being supported upon the axle portions 48 of the U-shaped bolt 49. The structure of the modification illustrated in Fig. 5 is the same as that illustrated in Figs. 1 to 4 inclusive of the drawing, with the exception that the axle portions of the U-shaped bolt 49 are radial from a point upon the bolster, as, for instance, where the king pin passes through the bolster and the rollers 47 and the openings in the cradle to receive them are similarly radial.

In the operation of a railroad car having my improved roller side bearings mounted thereon, upon the change of the plane of the bearing face of the bearing plate 7 to the plane of the bearing faces of the rollers, the rollers will automatically ad-

just themselves to the plane of the bearing plate upon the engagement of the bearing plate against them, and this whether the relative changes in planes are transverse or longitudinal of the bearing plate. The double pin for supporting the rollers or U-shaped axle serves to prevent the axle portions thereof from rotating with the rollers, and consequently wear between the axle and the metal of the cradle surrounding the perforations 51—51 therein, through which the axles pass, is prevented.

I claim:—

1. In a side bearing for railway cars, the combination with a base casting adapted to be secured to a bolster, said base casting being provided with an upstanding post, of a cradle supported on said post, said cradle and post having a universal bearing therebetween, and a roller carried by said cradle.

2. In a side bearing for railway cars, the combination with a base member adapted to be secured to a bolster, said base member having a vertically extending post, of a cradle supported on said post, the cradle and post providing a universal joint therebetween, and a pair of rollers carried by said cradle, said rollers being located on opposite sides of said post.

3. In a side bearing for railway cars, a base member, a cradle, and rollers mounted in said cradle, the base member being provided with a post, the cradle member having a bearing member engaging said post, the cradle being provided with means securing it to the base member, the said means permitting both longitudinal and transverse oscillation of the cradle upon the base member.

4. In a side bearing for railway cars, a base member, a cradle, and rollers mounted in the cradle, the cradle being provided with a bearing member, and the base member being provided with a post engaging the same, the post being transversely and longitudinally rounded to permit both the longitudinal and transverse oscillation of the cradle thereon.

5. In a side bearing for railway cars, a base member having an upstanding post with a rounded upper end, a cradle provided on its underside with a curved bearing fitting said rounded upper end of the post, a roller carried by said cradle, and a bolt extending vertically through said post and the cradle for retaining the latter in operative position.

6. In a side bearing for railway cars, a base member, a cradle, and rollers mounted in the cradle, the base member being provided with a rounded post, the cradle resting on said post and have oscillating movement in both transverse and longitudinal directions thereon.

7. In a side bearing for railway cars, a base member, a cradle resting thereon, rollers mounted in the cradle, and a bolt passing vertically through the base member and the cradle, the base member having a post with a rounded end engaging the cradle.

8. In a side bearing for railway cars, the combination with a base member, of a cradle, rollers carried by said cradle, said base member being provided with a post and the cradle being mounted thereon, said post and cradle being perforated for the passage of a bolt, and a bolt extending through the cradle and post, said perforations being enlarged to permit universal movement of the cradle with respect to said post.

9. In a side bearing for railway cars, a base member, a cradle, rollers in the cradle, and a bolt, the base member being provided with a rounded post, the cradle resting on said post, the bolt passing through the cradle and said post and being loosely mounted therein.

10. In a side bearing for railway cars, a base member, a cradle, and rollers mounted in said cradle, the base member being provided with a rounded portion, the cradle resting intermediate its ends upon said portion, the cradle being provided with means securing it to the base member and having oscillating movement in both longitudinal and transverse directions on said member.

11. In a side bearing for railway cars, a base member, a cradle, a pair of rollers and a bolt, the base member being provided with a rounded post, the cradle having chambers each to receive a roller, and also being provided with a bearing member intermediate the rollers to engage the said post, the bolt passing through the bearing member and the said post, and permitting the oscillation of the bearing member upon said post.

12. In a side bearing for railway cars, a base member, a cradle, rollers in either end of said cradle, and means for securing the cradle to the base member, the cradle and base member being provided with rounded engaging surfaces to permit the oscillation of the cradle upon the base member.

13. In a side bearing for railway cars, a base member, a cradle supported thereon, a plurality of rollers mounted in said cradle, and an axle for each of said rollers, the said axles being connected by integral extensions thereof.

14. In a side bearing for railway cars, a base member, a cradle supported thereon, a pair of rollers mounted in the cradle, and a U-shaped bolt having legs passing through the rollers and forming axles upon which the same may revolve.

15. In a side bearing for railway cars, a base member, a cradle supported thereon, a pair of rollers in said cradle, and a U-shaped

bolt, the cradle and rollers being provided with perforations for the passage of the legs of said bolt to form axles for the rollers.

5 16. In a side bearing for railway cars, a base member, rollers, and a cradle supporting the rollers, the cradle being provided between the rollers with a bearing member

having a concave surface, the base member being provided with a convex surface engaging the same.

In witness that I claim the foregoing I have hereunto subscribed my name this 16th day of February, 1916.

JOHN F. O'CONNOR.