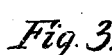


APPLICATION FILED OCT. 9, 1909.

Patented Mar. 25, 1913.

2 SHEETS—SHEET 1.



WITNESSES:
F. B. Townsend
Pearl A. A. A. A.

INVENTOR
John F. O'Connor
BY Munday, Evans,
Adcock & Clarke,
His ATTORNEYS

J. F. O'CONNOR.
 ROLLER SIDE BEARING FOR RAILWAY CARS.
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1,056,822.

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2 SHEETS—SHEET 2.

Fig. 4.

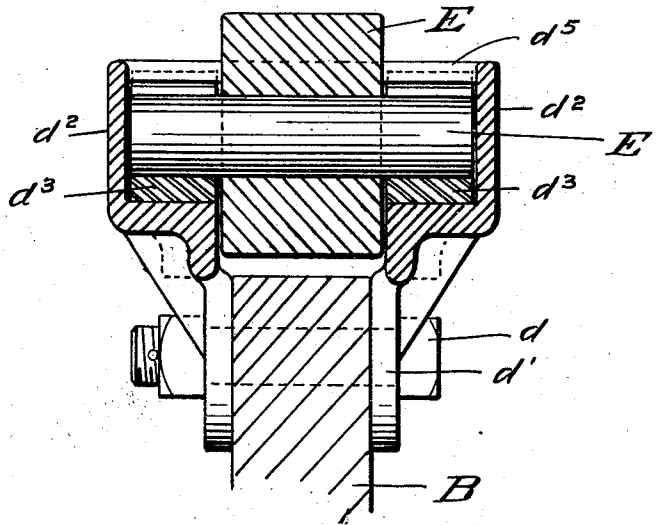
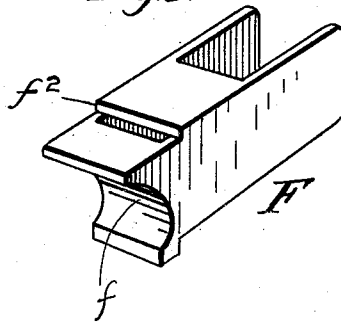


Fig. 5.



WITNESSES:
F. B. Townsend
Paul Abrams

INVENTOR
John F. O'Connor
 BY *Munday, Evans,*
Adcock & Clarke
 HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN F. O'CONNOR, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
WILLIAM H. MINER, OF CHICAGO, ILLINOIS.

ROLLER SIDE BEARING FOR RAILWAY-CARS.

1,056,822.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed October 9, 1909. Serial No. 521,786.

To all whom it may concern:

Be it known that I, JOHN F. O'CONNOR, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Roller Side Bearings for Railway-Cars, of which the following is a specification.

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

The object of my invention is to provide a roller side bearing of a strong, simple, efficient and durable construction composed of few parts, and which will provide for an extended travel or swing of the truck and body bolsters in respect to each other.

The roller side bearing embodying my invention comprises in cooperative combination an upper bearing plate or shoe fixed to the body bolster, a lower bearing plate fixed to the truck bolster, an anti-friction roller peripherally engaging the upper bearing plate and having trunnions of reduced diameter rolling upon the lower bearing plate, movable followers engaging said trunnions and springs interposed between said followers and the ends of the chambers in lower bearing plate in which the springs fit.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described and more particularly specified in the claims.

In the accompanying drawings forming a part of this specification, Figure 1 is an elevation showing the truck and body bolster of a railway car provided with my improved roller side bearing. Fig. 2 is a detail elevation, partly in section, on line 2-2 of Fig. 3 of the lower bearing plate, roller and parts associated therewith. Fig. 3 is a plan view, partly in horizontal section, on line 3-3 of Fig. 2. Fig. 4 is a vertical section on line 4-4 of Fig. 3 and Fig. 5 is a detail perspective view of one of the followers.

In the drawing, A represents a body bolster of a railway car and B the truck bolster thereof.

C is an upper bearing plate or shoe fixedly secured to the body bolster.

D is the lower bearing plate fixedly secured by bolts d to the truck bolster.

E is an anti-friction roller interposed between the upper and lower bearing plates

and having trunnions E^1 of reduced diameter for engagement with the lower bearing plate.

F are the followers and G the springs.

The lower bearing plate D is furnished with depending lugs d^1 fitting astride the truck bolster B and through which the bolts d pass, by which the lower bearing plate is secured to the truck bolster. The bearing plate D is provided with a central slot D^1 to receive the roller E and with longitudinal chambers D^2 to receive the trunnions E^1 of the roller E, which are preferably formed integral with each other, but in a separate piece from the roller, the trunnions being of the nature of a short shaft of tempered steel inserted through the roller. The bearing plate D has upright sides or guides d^2 for the ends of the roller trunnions to fit between and treads d^3 for the trunnions of the roller to roll upon, the treads d^3 being preferably of tempered steel and in a separate piece and removable from the bearing plate D, one of these treads or wearing plates d^3 fitting at each end of the roller.

The followers F, preferably four in number, are all alike and preferably of a general hollow, box-like shape, and provided each with a concave or journal face f for engagement with the trunnion E^1 of the roller E, and a projecting cylindrical stud or hub f^1 to receive one end of the spring G and serve as a seat or guide therefor. The bearing plate D is provided with a corresponding stud or cylindrical hub d^4 to serve as a seat and support for the other end of the spring G. Each of the followers F has a shoulder or stop f^2 to engage the corresponding shoulder or stop d^5 on the bearing plate D which limits the movement of the follower and serves to hold the parts in assembled position.

In my improved roller side bearing, when the load is relieved from the roller and the springs act to return the roller to central position, the concave or journal face of the followers acting against the trunnions offer greater friction to the turning of the roller than that of the periphery of the roller against the bearing plate, which has the weight of the roller only to produce traction or friction, and as a consequence the roller is to a greater or less extent returned to position by a sliding movement, thus constantly changing the contact point between

the roller and the upper and lower bearing plates, and thereby preventing flat spots being worn upon the roller. In this connection, it will be understood that the tension of the springs is very much greater than the weight of the roller after being compressed by the swinging movement of one of the bolsters in respect to the other. The concave faces of the followers thus act like brake shoes against the trunnions of the anti-friction roller and give the followers a brake acting function in accomplishing this result of constantly changing the contact point between the roller and the bearing plate and thereby preventing the wearing of flat spots.

I claim:—

1. In a roller side bearing for railway cars, the combination with an upper bearing plate fixed to the body bolster, of a lower bearing plate fixed to the truck bolster, a roller extending transversely across said bearing plates and engaging the upper bearing plate and having trunnions of reduced diameter engaging the lower bearing plate, a pair of independently, separately, movable followers engaging each trunnion on opposite sides thereof and springs interposed between each of said followers and said lower bearing plate, each of said followers having a concave face engaging a trunnion of the roller, substantially as specified.

2. In a roller bearing, the combination with a single roller having trunnions, of a bearing plate having a slot to receive the roller and provided with treads for the trunnions of the roller to roll upon, and four spring-pressed independently, separately movable followers engaging said trunnions on opposite sides thereof, each of said followers having a face engaging a trunnion of the roller, substantially as specified.

3. In a roller bearing, the combination with a single roller having trunnions, of a

bearing plate, followers, and springs, said bearing plate having chambers to receive the followers, springs, and roller trunnions and being also slotted to receive the roller, said followers comprising four independently, separately movable members each having a journal face engaging the trunnions of the roller, one on each side of the trunnions, said springs being interposed intermediate said followers and said bearing plate, substantially as specified.

4. In a roller bearing, the combination with a single roller having trunnions, of a bearing plate, followers, and springs, said bearing plate having chambers to receive the followers, springs, and roller trunnions and being also slotted to receive the roller, said followers comprising four independently, separately movable members each having a journal face engaging the trunnions of the roller, one on each side of the trunnions, said springs being interposed intermediate said followers and said bearing plate, and said bearing plate being also provided with studs to receive the ends of the springs, substantially as specified.

5. In a roller bearing, the combination with a single roller having trunnions, of a bearing plate, followers, and springs, said bearing plate having chambers to receive the followers, springs, and roller trunnions and being also slotted to receive the roller, said followers comprising four independently, separately movable members each having a journal face engaging the trunnions of the roller, one on each side of the trunnions, said springs being interposed intermediate said followers and said bearing plate, said followers and bearing plate having interengaging stops, substantially as specified.

JOHN F. O'CONNOR.

Witnesses:

EDMUND ADCOCK,
PEARL ABRAMS.