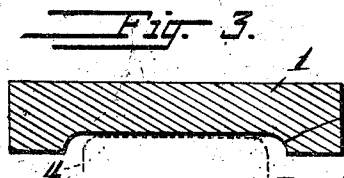
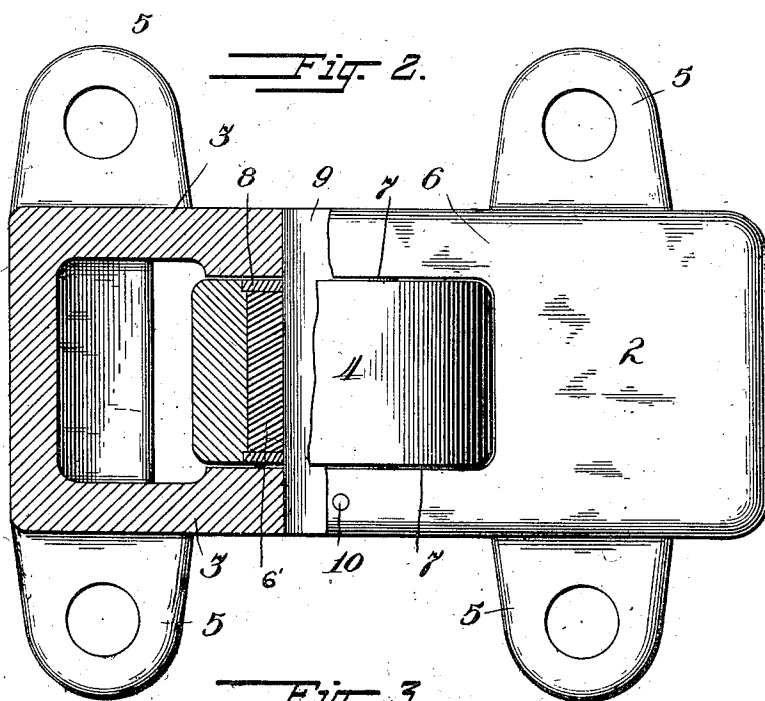
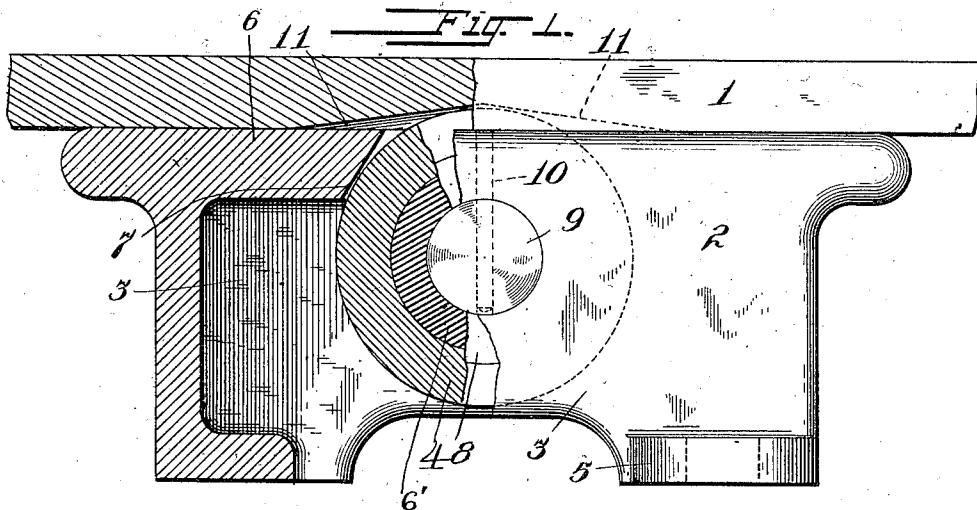


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 ANTIFRICTION SIDE BEARING FOR RAILWAY CARS.
 APPLICATION FILED AUG. 29, 1907.

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ANTIFRICTION SIDE BEARING FOR RAILWAY-CARS.

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To all whom it may concern:

Be it known that I, HUBERT M. PERRY, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Antifriction Side Bearings for Railway-Cars, of which the following is a specification.

This invention relates to improvements in anti-friction side bearings for railway cars.

The salient object of the invention is to provide a construction in which the chief advantage of an anti-friction bearing, viz. the minimizing of frictional resistance to movement of the car trucks relative to the car body in traversing curves, is fully secured, yet, nevertheless, the anti-friction roller is during that part of the time while the car is traversing straight track functionally out of commission, and the roller supporting base or casing of the truck and the bearing plate of the car body then cooperate as dead stops to limit the oscillation of the car body without subjecting the roller to weight.

On curves of railway tracks the outer rail, is raised or made higher than the inner rail. As the car traverses the curve, if moving at any considerable speed, the car body is thrown outwardly by the centrifugal action on the side of the truck traversing the higher rail thus bringing the weight of the car on the bearing plate on that side of the bolster. It is obvious, however, that in rounding a curve the truck bolster will be considerably displaced from its normal central position relatively to the car body before the weight of the latter begins to settle on the side bearing. Normally, when the car body and truck are centered, if the car be loaded properly, the weight will rest wholly on the center bearing. These facts are taken advantage of in my improved construction as will hereinafter clearly appear.

The invention will be readily understood from the following description reference being had to the accompanying drawing in which—

Figure 1 is a side elevation of my device, the bearing plate of the body bolster being shown centered, the left hand side of the figure being shown in longitudinal vertical section. Fig. 2 is a top plan view of the bearing, the left hand side of the

figure being shown in horizontal section. Fig. 3 is a cross sectional view through the bearing plate, showing the relative widths of the roller and recess in the bearing plate.

Referring to the drawings 1 designates as a whole a bearing plate adapted to be fixed to the car body or body bolster in any usual manner. Cooperating with this bearing plate, is a bearing member designated as a whole 2 and as shown comprising a suitable base 3 and an anti-friction roller 4 journaled therein. In the preferred form seen in the drawing, the base consists of a single-piece cast iron structure of box like form which is adapted to be fixed to the truck bolster by bolts inserted through lateral lugs or feet 5, in a well known manner. This casing 3 is made open at its lower or base side and is provided with an integral top or cover portion 6 which is however centrally apertured at 7 to permit the periphery of the roller to protrude there-through. The roller 4 has a steel bushing 6' and wear plates or washers 8 let into each of its ends and is rotatably journaled upon a journal pin 9 which extends through the roller and into the sides of the casing member 2. This journal pin 9 is locked against rotation by means of an ordinary pin 10 as shown clearly in the drawings. The roller 4 is so journaled that its periphery extends somewhat above the top surface of the casing 2, as shown in Fig. 1.

In order that the bearing plate 1 may normally, *i. e.* while centered, encounter the base casting only, and not the roller, said bearing plate is provided centrally in its under surface with an oppositely inclined recess 11 which is of slightly greater width than the roller 4 and slightly deeper at its center than the height of the protruding part of the roller, so that the upper part of the periphery of the roller may rotate freely therein. To the end that this bearing plate may not be substantially weakened, it is not recessed across its entire width, but only sufficient to accommodate the roller and so as to leave at either side of the recess full-thickness portions 12, 12, as shown clearly in Fig. 3.

Inasmuch as the car body together with the bearing plates mounted therein, will inevitably be displaced relatively to the side bearing boxes, when rounding a curve, before the centrifugal weight of the car body

is thrown on the side bearings, it will be seen that the plate will have swung over the roller 4 some distance and probably enough to carry the recess 11 entirely out of register with the roller before the latter receives the weight of the car body. The further displacement of the bearing plate will of course be unaccompanied with any lifting of the car body since the car body will not have to ride over an inclined plane during the time the roller is supporting its weight.

From the foregoing it will be obvious that in operation, during the greater part of the time *i. e.* during all that time when the car is traversing straight tracks the anti-friction roller and its journals will be entirely relieved from wear and weight and the massive base or casing will cooperate with the bearing plate to positively limit the oscillation of the car body in precisely the same manner as do ordinary side bearings unprovided with anti-friction devices. This feature of the construction obviously very greatly prolongs the life and preserves the effectiveness of the roller bearing. At the same time the bearings are fully effective as anti-friction bearings at all times when anti-friction bearings are required, viz. when there is movement of the car body relatively to the truck bolster or truck frame.

The details of construction are not, in the broader scope of the invention, essential.

I claim as my invention:

1. In a side bearing, the combination with a base supporting member, of a roller having journal shaft bearings of reduced diameter rotatably journaled in said base member and having its periphery protruding through and above the top of said base member and a bearing plate adapted to reciprocate across the upper face of said base member and having a central recess in its under side, whereby it is normally out of contact with the protruding periphery of said roller.

2. In a side bearing, the combination with a fixed roller-supporting member having a surface adapted for cooperation with an opposed bearing plate, of a roller rotatably journaled in said fixed member upon non-traveling journal bearings and having its periphery arranged to protrude through and beyond the said contacting surface of the fixed member, and a bearing plate mounted to reciprocate across the exposed face of said fixed member, said bearing plate having a recess, with oppositely inclined

track surfaces, which register with the protruding periphery of said roller when in normal relation to the latter.

3. A side bearing for cars comprising a box like base member provided with an integral cover portion apertured to receive the periphery of a roller and having an open lower side through which said roller may be inserted, a journal pin mounted in said base member, a roller rotatably journaled on said pin and having its periphery protruding through and above the cover portion of said base member, a bearing plate adapted to reciprocate across the upper face of said roller, said bearing plate being cut away at its lower face to form an oppositely inclined recess in which the protruding periphery of said roller normally extends, whereby said bearing plate is out of contact with said roller when the former is in its normal position.

4. A side bearing for cars comprising a roller, a supporting base member having spaced-apart roller-supporting sides, an upper contact surface adapted for cooperation with an opposed bearing plate and provided with an aperture which registers with the space within which the roller is mounted, an anti-friction roller journaled upon a non-traveling axis within said base member, with its periphery protruding beyond said contact surface of the latter, and a bearing plate mounted to reciprocate across the upper face of said roller and provided in its under side with a recess conforming approximately to the protruding part of the periphery of said roller and into which the latter normally extends, whereby said bearing plate is made to clear the roller when in its normal position, and has effective bearing with the roller when displaced in either of the directions of its operative movements.

5. In a side bearing, the combination with a base supporting member, a roller rotatably journaled in said base member and having its periphery protruding through and above the top of said base member, means for confining said roller in definite relation to said base member, a bearing plate adapted to reciprocate across the upper face of said base member and having a central recess in its under side, whereby it is normally out of contact with the protruding periphery of said roller.

HUBERT M. PERRY.

Witnesses:

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