(No Model.)

W. J. TRIPP.

ROLLER BEARING FOR CAR JOURNALS.

No. 587,248. Patented July 27, 1897.

Fig. 1.

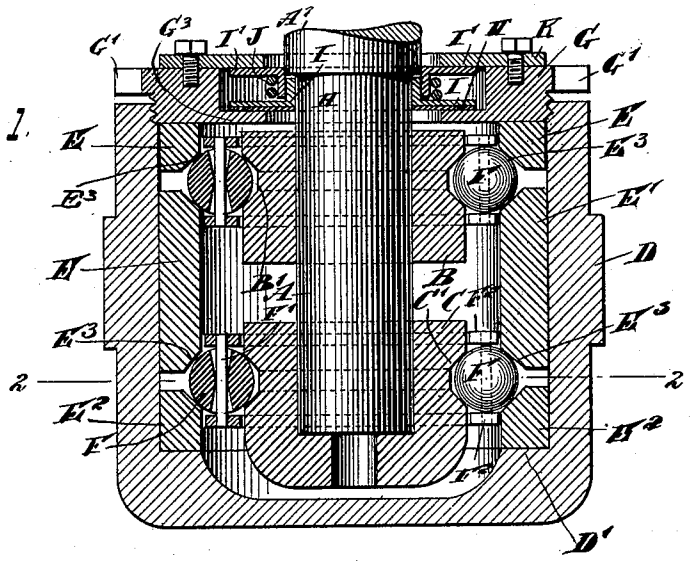


Fig. 2.

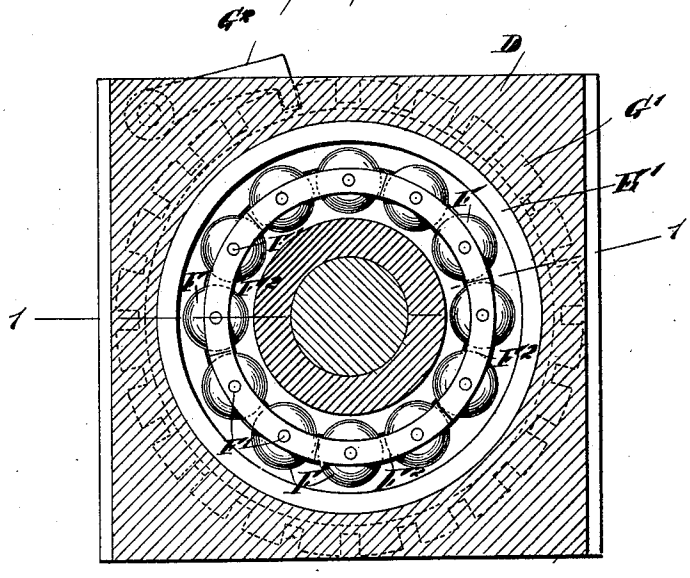
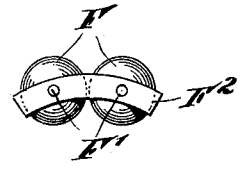


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM J. TRIPP, OF NEW YORK, N. Y.

ROLLER-BEARING FOR CAR-JOURNALS.

SPECIFICATION forming part of Letters Patent No. 587,248, dated July 27, 1897.

Application filed October 24, 1896. Serial No. 609,880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. TRIPP, of New York city, in the county and State of New York, have invented a new and Improved Roller-Bearing for Car-Journals, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved roller-bearing for car-journals which is completely dust-proof, arranged to reduce friction to a minimum to insure long life to the several parts, and adapted to readily take up all end thrust of the axle.

The invention consists principally of a box, a thrust-cap on the end of the journal, and rings in the said box and forming with the said thrust-cap a ball-race for the balls.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional plan view of the improvement on the line 1 1 of Fig. 2. Fig. 2 is a sectional front view of the same on the line 2 2 of Fig. 1, and Fig. 3 is a side elevation of a ball-section.

On the car-journal A is loosely held a collar B and a cap C, both extending into a box D, held on the car-truck in the usual manner and closed at its outer end, as plainly indicated in the drawings. In this box D are arranged a series of rings E E′ E^2 in alinement with one another and with the outer face of the outer ring E^2 resting against a projection D′, formed on the inside of the box D, so that this ring E^2 is prevented from moving outwardly.

In the peripheries of the collar B and the cap C are formed annular V-shaped grooves B′ and C′, respectively, which form, with the beveled edges of the corresponding rings E E′ E^2, ball-races for the balls F, preferably journaled on transversely-extending axes F′, held in ring-sections F^2, as plainly indicated in the drawings. The inner end of the box D is adapted to be closed by a cover G, preferably screwing in the said box and formed with a toothed flange G′, engaged by a locking-pawl G^2, pivoted on the inner end of the box D, the said pawl serving to lock the said cover in place after the latter is screwed in position on the inner end of the box D. The cover G is adapted to engage the inner face of the innermost ring E, so that when the cover is turned the said ring is adjusted lengthwise in the box and by the balls F insures an adjustment of the rings E′ and B, as well as of the cap C.

The cover G is ring-shaped and is formed with an inwardly-extending annular flange G^3, through which passes the journal A and on which abuts a washer H, of suitable material and held to the flange by an L-shaped ring I, pressed on by a spring J, resting against a similar ring I′, fitted on the under side of a plate K, bolted or otherwise fastened to the cover G. The ring I fits close upon the journal A, next to the axle A′, so that the cover G is completely dust-proof, and consequently the box D and all its contents are rendered dust-proof, owing to the box being closed on the outer end. Now it will be seen that by the arrangement described the collars B and C are free to revolve on the journal A and are also free to slide on the said journal, together with the rings E E′, so that any wear between the balls and the surface of the ball-race can be readily taken up by the operator screwing up the cover G. It will further be seen that as the collar C is in the form of a cap fitted upon the end of the journal the said cap will take up any thrust of the axle, owing to the balls F and the ring E^2 being held against outward movement in the box D by abutting against the projection D′.

It is understood that I do not limit myself to balls journaled on axes held in sectional rings, as it is plain that loose balls may be used in the ball-races formed between the collar B, the cap C, and the rings E E′ E^2.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A roller-bearing for car-journals, comprising a box, a thrust-cap on the end of the journal, and rings in the said box and forming with the said thrust-cap a ball-race for the balls, substantially as shown and described.

2. A roller-bearing for car-journals, comprising a box, rings held in the said box and formed with beveled edges, one of the rings abutting against the outer end of the box, and a thrust-cap held on the end of the journal and forming with the said beveled edges a ball-race, substantially as shown and described.

3. A roller-bearing for car-journals, comprising a box, a ring held in the said box against outward movement, a second ring adjacent to the first-named ring, and a thrust-cap held on the end of the journal and forming with the said rings a ball-race for the balls, substantially as shown and described.

4. A roller-bearing for car-journals, comprising collars held on the journal, a series of rings forming ball-races with the said collars, the outermost ring being held against movement, the remaining rings being free to move toward the outer ring, balls held in the said races, and sectional rings carrying pivots for the balls to turn on, substantially as shown and described.

5. A roller-bearing for car-journals, comprising a box closed at the outer end, a ring held in the closed end of the said box, a series of rings in alinement with the said outer ring, a collar and a thrust-cap held on the journal and forming ball-races with the said rings, a set of balls for each ball-race, and an adjustable dust-cap held on the inner end of the box and engaging the innermost ring, to adjust the several rings in their relation to each other and to the balls, substantially as shown and described.

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Witnesses:
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