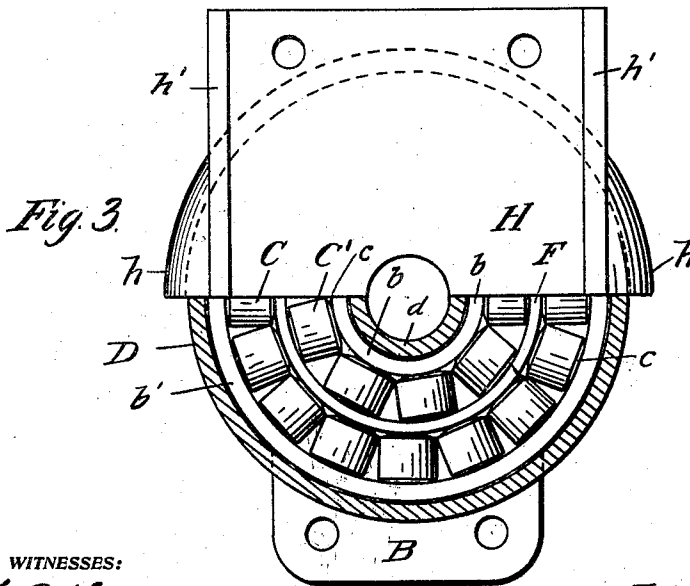
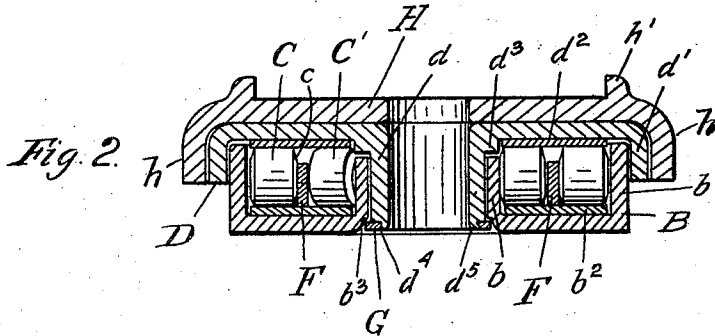
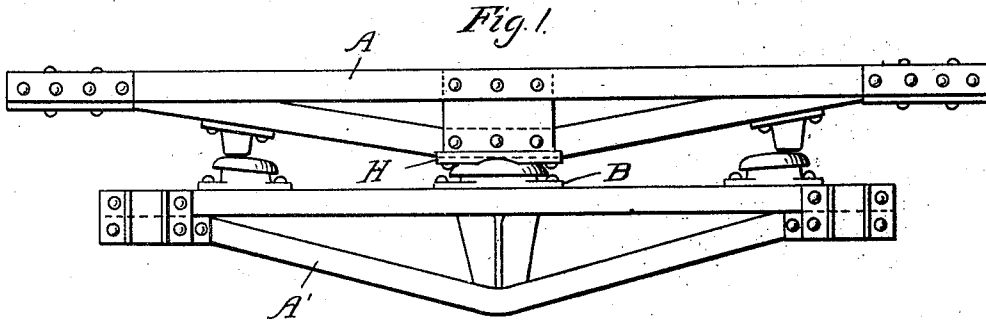


J. F. O'CONNOR.
 ROLLER CENTER BEARING.
 APPLICATION FILED MAY 8, 1908.

940,819.

Patented Nov. 23, 1909.



WITNESSES:

F. B. Townsend
H. M. Munday

INVENTOR

John F. O'Connor

BY

Munday, Coats, Adams & Clarke,
 HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN F. O'CONNOR, OF CHICAGO, ILLINOIS, ASSIGNOR TO W. H. MINER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ROLLER CENTER-BEARING.

940,819.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed May 8, 1908. Serial No. 431,660.

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 Center-Bearings, of which the following is a specification.

My invention relates to roller center bearing for railway cars.

My invention consists in the novel construction of parts and devices and in the novel combination of parts and devices herein shown and described.

In the accompanying drawing forming a part of this specification, Figure 1 is a front elevation of a car truck bolster and body bolster provided with my improved center bearing. Fig. 2 is a central vertical section through the center bearing. Fig. 3 is a plan view partly broken away and in horizontal section.

In the drawing, A represents the body bolster, A¹ the truck bolster, B the lower bearing plate, C C¹ two separate sets of anti-friction rollers, D the upper center plate and F a separating ring interposed between the two sets of anti-friction rollers.

The lower center plate B is provided with an annular hub or flange *b* and with an annular rim or flange *b*¹. It is also furnished with an annular flat tread *b*² between the annular hub *b* and rim *b*¹. This annular tread *b*² is preferably formed of a separate piece or disk from the lower bearing plate B to enable it to be readily removed and replaced when worn, and to enable this wearing plate tread to be made of harder and more durable material.

The upper center plate D is furnished with an annular hub *d* which extends through the annular hub *b* of the lower center plate B and with an annular rim *d*¹ which embraces or telescopes over the annular rim *b*¹ of the lower center plate B. The upper center plate D is also preferably furnished with a separate piece and removable flat annular tread *d*² corresponding to the annular tread *b*² of the lower bearing plate. The upper center plate B is also preferably furnished with an annular shoulder *d*³ which overhangs the upper edge of the annular hub *b* of the lower center plate B. The two center plates B, D are preferably secured together, after being assembled, by means of a connecting ring G, which

fits in an annular recess *b*³ in the lower center plate B and in an annular recess *d*⁴ in the hub *d* of the upper center plate D, and is secured in place by bending or clenching the flange or lip *d*⁵ on the hub *d* over said connecting ring G.

The separating ring F is a loose ring placed between the inner and outer sets of anti-friction rollers C C¹.

The anti-friction rollers C C¹ are each preferably furnished with rounded or beveled end faces *c* to limit their contacting area with the inner and outer rims *b* *b*¹ of the lower center plate B and with the separating ring F.

As the anti-friction rollers C C¹ are plain cylindrical rollers and trunnionless, and as they are comparatively short in length and fit closely adjacent to each other and between the separating ring F and the adjacent annular rim of the lower bearing plate, they are thus readily maintained in proper radial arrangement, while at the same time all the parts, including the upper and lower center plates, and separating ring F are of very simple shape and form and may be manufactured very cheaply, while at the same time also the center bearing as a whole is very efficient in operation.

H is a supplemental upper plate secured directly to the body bolster and having a depending flange or rim *h* surrounding the upper center bearing plate D. The supplemental or top plate H is also preferably furnished with upwardly projecting ribs or flanges *h*¹ between which the body bolster fits. This supplemental top center plate H enables the upper and lower center plates B D to be permanently secured together by the connecting ring G, as it affords a means of separation between the body bolster and truck in case of derailment, or when it is desired to remove the truck from the car body for repair or other purposes.

The connecting ring G in connection with the recess or shoulder *d*⁴ at the lower end of the annular hub *d* of the upper center bearing plate D enables the two center bearing plates B D to be permanently connected together with the requisite and proper amount of play so that the one can freely turn in respect to the other.

I claim:—

1. In a center bearing, the combination of upper and lower center plates having flat

parallel annular treads and telescoping annular rims and telescoping annular hubs, and two sets or series of short, radially arranged anti-friction cylindrical rollers peripherally contacting at their inner ends interposed between said center plates, and a loose separating ring interposed between said sets of anti-friction rollers, there being a greater number of rollers in one set than in the other, substantially as specified.

2. In a center bearing, the combination of upper and lower center plates having flat parallel annular treads and telescoping annular rims and telescoping annular hubs, and two sets or series of short, radially arranged anti-friction cylindrical rollers peripherally contacting at their inner ends interposed between said center plates, and a loose separating ring interposed between said sets of anti-friction rollers, said rollers having beveled end faces, there being a greater number of rollers in one set than in the other, substantially as specified.

3. In a center bearing, the combination of upper and lower center plates having flat parallel annular treads and telescoping annular rims and telescoping annular hubs, and two sets or series of short, radially arranged anti-friction cylindrical rollers peripherally contacting at their inner ends interposed between said center plates, and a loose separating ring interposed between said sets of anti-friction rollers, said rollers having beveled end faces, said separating ring cooperating with the inner and outer rims of the lower center plate to maintain the rollers in proper radial arrangement, there being a greater number of rollers in one set than in the other, substantially as specified.

4. In a center bearing, the combination of upper and lower center plates having telescoping annular rims and telescoping annular hubs, and two sets or series of short, radially arranged anti-friction rollers interposed between said center plates, and a loose separating ring interposed between said sets of anti-friction rollers, said rollers having beveled end faces, said separating ring cooperating with the inner and outer rims of the lower center plate to maintain the rollers in proper radial arrangement,

and a connecting ring secured to the inner hub of one of the center plates, substantially as specified.

5. The combination with a lower center plate having an annular hub and an annular rim, of an upper center plate having an annular hub and an annular rim, a connecting ring secured to the hub of the upper center plate at the end thereof, two sets of radially arranged trunnionless anti-friction short cylindrical rollers peripherally contacting at their inner ends interposed between said center plates, there being a greater number of rollers in one set than in the other, substantially as specified.

6. The combination with a lower center plate having an annular hub and an annular rim, of an upper center plate having an annular hub and an annular rim, a connecting ring secured to the hub of the upper center plate at the end thereof, two sets of radially arranged trunnionless anti-friction short cylindrical rollers peripherally contacting at their inner ends interposed between said center plates, and a loose separating ring between the inner set and outer set of anti-friction rollers, there being a greater number of rollers in one set than in the other, substantially as specified.

7. In a center bearing, the combination of a lower center bearing plate with an upper center bearing plate, anti-friction devices between said center bearing plates, means for rotatably connecting said center bearing plates together, and a supplemental top center bearing plate secured to the body bolster, substantially as specified.

8. In a center bearing, the combination of a lower center bearing plate with an upper center bearing plate, anti-friction devices between said center bearing plates, means for rotatably connecting said center bearing plates together, and a supplemental top center bearing plate having a flange secured to the body bolster, said supplemental top plate having a marginal rim embracing said upper center bearing plate, substantially as specified.

JOHN F. O'CONNOR.

Witnesses:

H. M. MUNDAY,
EDMUND ADCOCK.