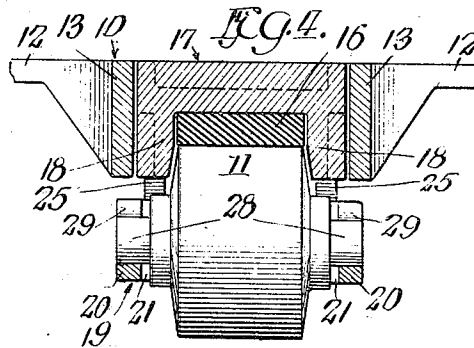
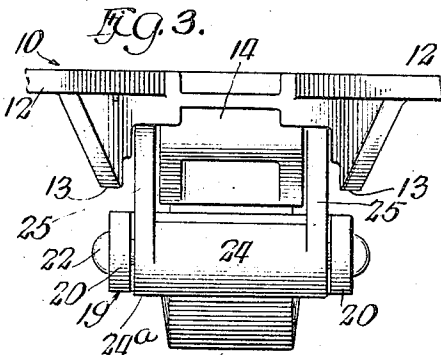
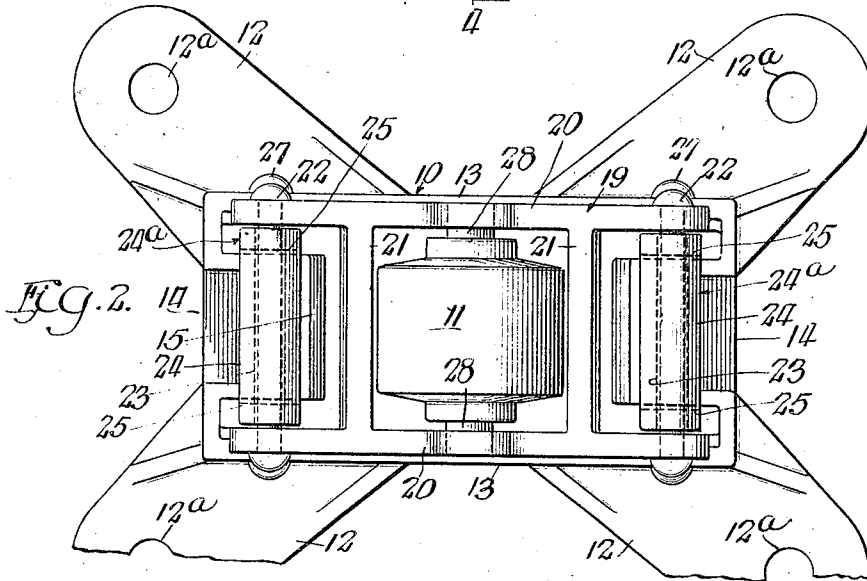
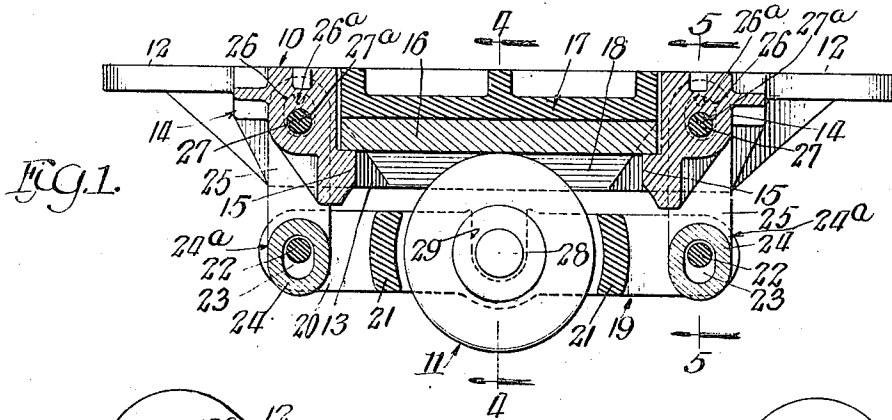


1,041,209.

Patented Oct. 15, 1912.

2 SHEETS—SHEET 1.



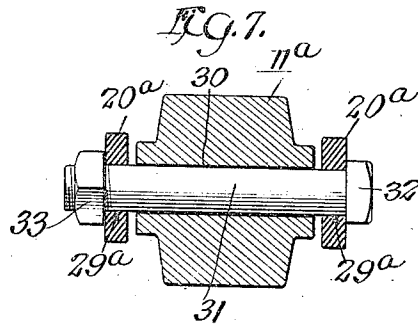
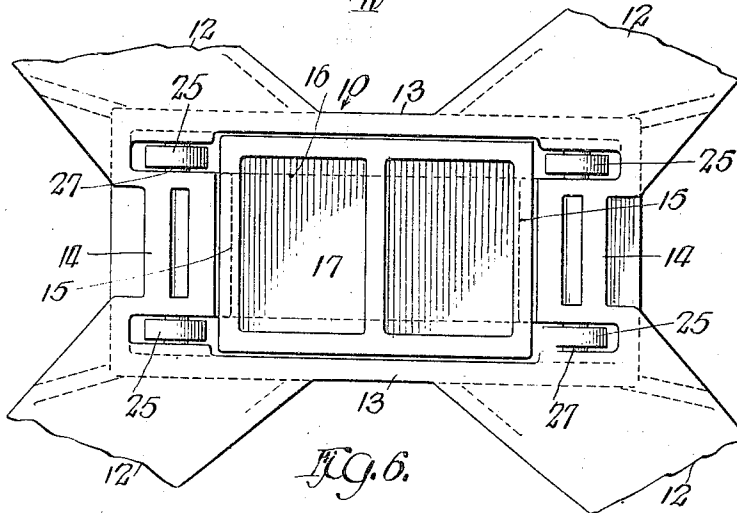
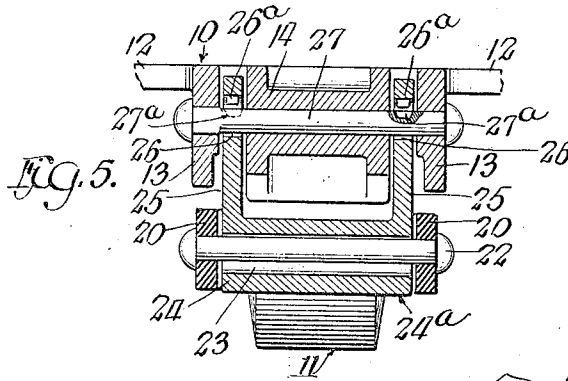
Witnesses:
J. H. Alfred
L. R. Wilkins

Inventor:
Arnold A. Weigel
 by *Pool & Brown* Attys

1,041,209.

Patented Oct. 15, 1912.

2 SHEETS—SHEET 2.



Witnesses:
J. H. Alfords
H. R. Wilkins

Inventor:
Arnold A. Weigel
Poole & Brown Atty's

UNITED STATES PATENT OFFICE.

ARNOLD A. WEIGEL, OF CHICAGO, ILLINOIS, ASSIGNOR TO EDWIN S. WOODS, OF CHICAGO, ILLINOIS.

ANTIFRICTION-BEARING.

1,041,209.

Specification of Letters Patent.

Patented Oct. 15, 1912.

Application filed March 27, 1911. Serial No. 617,242.

To all whom it may concern:

Be it known that I, ARNOLD A. WEIGEL, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Antifriction-Bearings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to antifriction bearings, and more particularly to what are known as side bearings for use on railroad cars.

The invention consists of the matters hereinafter described, and more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a view representing a longitudinal, central section through a side bearing made in accordance with my invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is an end elevation. Fig. 4 is a transverse section through the bearing on the line 4—4 of Fig. 1. Fig. 5 is a transverse section through the bearing on line 5—5 of Fig. 1. Fig. 6 is a top plan view of the bearing. Fig. 7 is a transverse section through the antifriction roller and the frame supporting the same showing a slightly modified form of the construction.

Referring now more particularly in detail to the drawings, 10 represents a casing by means of which the antifriction device is secured to the car bolster; said casing inclosing an antifriction roller 11 which is adapted to transmit load in a familiar manner from a bearing or wear-plate supported in the casing to be more particularly referred to later, and a bearing or wear-plate provided on the truck bolster. The casing 10 is of oblong, rectangular form and is provided at its four corners with ears 12 located on a level with its top surface and by means of which it is adapted to be secured to the car bolster by bolts (not shown) which pass through apertures 12^a in said ears. The said casing comprises side members 13, 13 and end members 14, 14. The latter are provided on their inner faces with transversely extending lugs or shoulders 15, 15 on which rests a bearing or wear-plate 16, said wear-plate being in this instance located a distance below the upper face of the casing 10.

On said wear-plate bears a filler block 17 which confines the wear-plate within the casing and which has lateral, longitudinally extending ribs or flanges 18, which are located at each side of the wear-plate 16 between the lateral edges of said wear-plate and the inner faces of the side members 13, 13 of the casing 10. Said ribs or flanges 18, 18, of the filler block 17, depend below the lower face of the wear-plate 16 and provide thrust shoulders to take up the lateral thrust of the antifriction roller 11.

The antifriction roller 11 is suspended from the frame or casing 10 by the following mechanism: 19 indicates a roller frame comprising laterally spaced side members 20, 20, and transverse webs 21, 21 which are located one in front and one at the rear of the roller 11. The side members 20, 20 of said roller bearing frame are connected at their ends by transverse rods 22, 22 which extend through vertically elongated apertures 23, 23 formed in sleeves 24, 24 which are each made integral with a pair of upright links 25, 25. Said links and sleeves together constitute swinging suspension members 24^a which connect the roller frame with the casing and suspend the said roller frame therefrom. At the upper ends of said links 25, 25 are formed vertically elongated eyes 26, 26 by means of which said links are suspended from transverse rods 27, 27 secured to the frame 10.

As shown in Figs. 1 to 6, inclusive, the antifriction roller 11 is provided with integral trunnions 28, 28 which rest in U-shaped, upwardly opening sockets 29, 29 formed in the side members 20, 20 of the roller carrying frame.

The operation of the bearing is as follows: When the roller is transmitting load and engaged with the bearing or wear-plate 16, the rods 22, 22 are in the highest parts of the apertures through which they extend, and the links 25 are each, as a whole, in their highest position with the rods 27 in the lowest parts of the eyes 26 in said links in which they are located. When the antifriction roller rolls away from the center of the casing it carries the roller bearing frame with it, this movement of said frame being made possible by reason of the lost motion provided by the elongated apertures in which the several pivot rods are located. When the antifriction roller is released, the

weight of the suspension members 24^a, 24^a comprised by the pairs of links 25, 25 and the associated integral sleeves 24, 24 causes them pendulum-like to swing toward a vertical position, thus returning the roller bearing frame to its normal central position and with it the antifriction roller.

In the preferred form of my improved bearing the rods 27 are mounted in the frame so as to be non-rotative, said rods being squared at one end as shown in Fig. 5. The links 25 are each provided with a detent 26^a depending from the upper side of the eye 26 and adapted to engage in a notch or opening 27^a in the rod 27, below said detent. The object of these detents and notches is as follows: After the roller carrying frame, during the transmission of load by the roller, has moved to one or the other side of the center of the frame or casing and when the roller is released and brought back to center by means of the swinging, suspension members 24^a, the detents 26^a of the links engage in the notches 27^a of the rods 27 and lock said suspension members in vertical position. This position is maintained, notwithstanding jars or jolts of the car until the antifriction roller is raised into engagement with the wear plate 16, when said roller is next brought into place to transmit load from the body bolster to the truck bolster. This prevents a constant swinging movement of the suspension arms when the antifriction member is idle and obviates the resultant wear and rattling of the parts.

In Fig. 7 I have shown a modification of the means by which the roller is supported in its frame. In this case 11^a indicates the roller, and 20^a, 20^a the side members of its supporting frame. The roller 11^a has a central bore 30 in which is located a bolt or rivet 31 which extends through suitable apertures 29^a, 29^a formed in the side members of the frame, said bolt being held in place on one side by a head 32 and on the other by a nut 33. In this case, the roller instead of having integral trunnions which have bearing in the side members of the frame is journaled on a bolt which rigidly connects the side members of the frame. Manifestly, the bolt might be replaced by a rivet.

I claim as my invention:—

1. In an antifriction bearing, in combination with an antifriction member, and a swinging suspension member adapted for supporting said antifriction member, means for locking said swinging suspension member in a predetermined position when said antifriction member is not transmitting load.

2. In an antifriction bearing, in combination with an antifriction member, and means for suspending said antifriction member, said suspending means including a link pro-

vided with an eye, and a non-rotative bearing located in said eye, said link and eye being provided with engaging parts adapted to lock said link in a predetermined position when said link is suspended from said bearing.

3. In an antifriction bearing, in combination with an antifriction member, and means for suspending said antifriction member, said suspending means including a link provided with an eye, and a non-rotative rod extending through said eye, said link being provided with a depending detent located in said eye and adapted for engagement with a notch formed in the upper side of said rod below said detent, when said link is suspended from said rod.

4. An antifriction device comprising an antifriction member carrying frame, an antifriction member rotatively carried thereby, and swinging suspension members pivotally connected at each end of said antifriction member carrying frame.

5. An antifriction device comprising an antifriction member carrying frame, an antifriction member rotatively carried thereby, swinging suspension members pivotally connected at each end of said antifriction member carrying frame, and means providing lost motion in the pivotal connections of said suspension members.

6. An antifriction device comprising an antifriction member carrying frame having laterally separated, longitudinally extending side members, an antifriction member rotatively carried thereby, rods rigidly connecting said side members at each end of said frame, and swinging suspension members provided with vertically elongated slots through which said rods extend.

7. An antifriction device comprising a suspension frame, swinging members pivotally connected at each end of said frame, said swinging members each comprising laterally separated upright links and an integral sleeve provided with a vertically elongated transverse aperture, an antifriction member carrying frame embracing side members and transverse rods connecting the ends of said side members, said rods extending through the transverse apertures in said sleeves, and an antifriction member rotatively carried by said side members.

8. An antifriction bearing comprising a rectangular frame having side members and end members, shoulders made rigid with the inner walls of said end members, a wear-plate supported on said shoulders, a filler block resting upon said wear-plate and provided with longitudinally extending flanges depending below said wear-plate and forming thrust shoulders, swinging members pivotally connected to each end of said rectangular frame, a roller carrying frame comprising side members and rods connecting

the ends of said side members, said rods extending through vertically elongated apertures in the lower ends of said suspension members, and an antifriction roller 5 rotatively carried by said side members.

9. An antifriction bearing comprising an open top casing, a wear-plate supported within said casing, an antifriction member supported by said casing, and a filler block 10 confining said wear-plate within said casing, said filler block having longitudinal, laterally separated flanges depending at each side of said wear-plate and below the same, and providing lateral thrust shoulders 15 for said antifriction member.

10. An antifriction bearing comprising a casing, a wear-plate supported within said casing, an antifriction member supported by said casing, and a filler block within 20 said casing, said filler block having longitudinal, laterally separated flanges depending at each side of said wear-plate and be-

low the same, and providing lateral thrust shoulders for said antifriction member.

11. An antifriction bearing comprising an 25 open top casing, a wear-plate supported within said casing, a filler block confining said wear-plate within said casing, said filler block having longitudinally extending, laterally separated flanges which em- 30 brace the lateral edges of said wear-plate and depend below the same to provide lateral thrust shoulders, a frame, swinging members connecting said frame at each end with said casing, and an antifriction member 35 rotatively carried by said frame.

In testimony, that I claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 14th day of March A. D. 1911.

ARNOLD A. WEIGEL.

Witnesses:

CLARENCE E. MEHLHOPE,
T. H. ALFREDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."