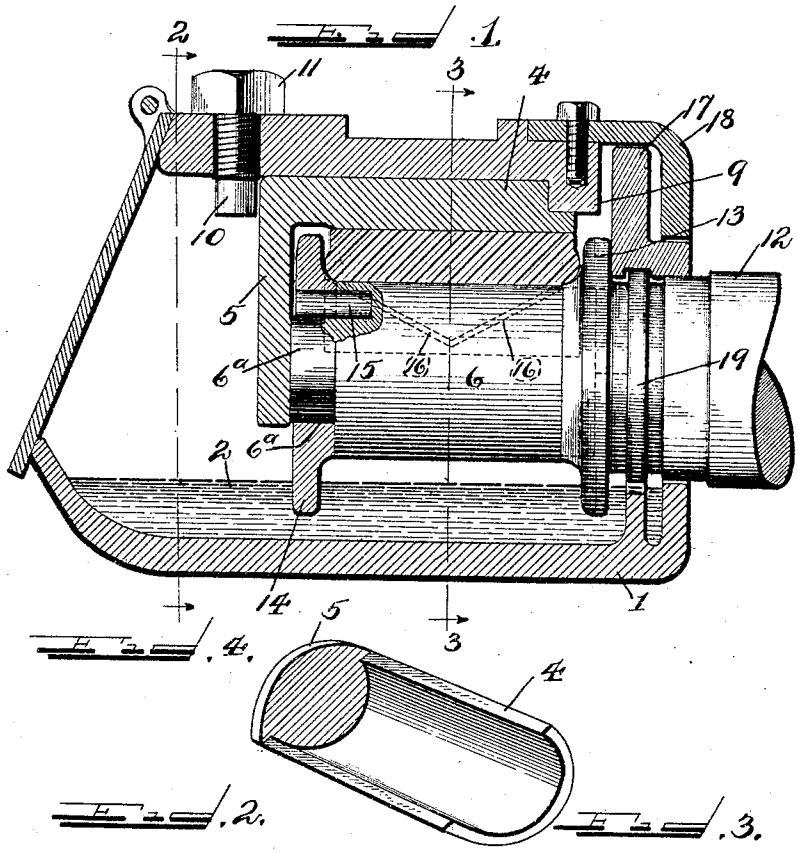
No. 771,993. PATENTED OCT. 11, 1904.

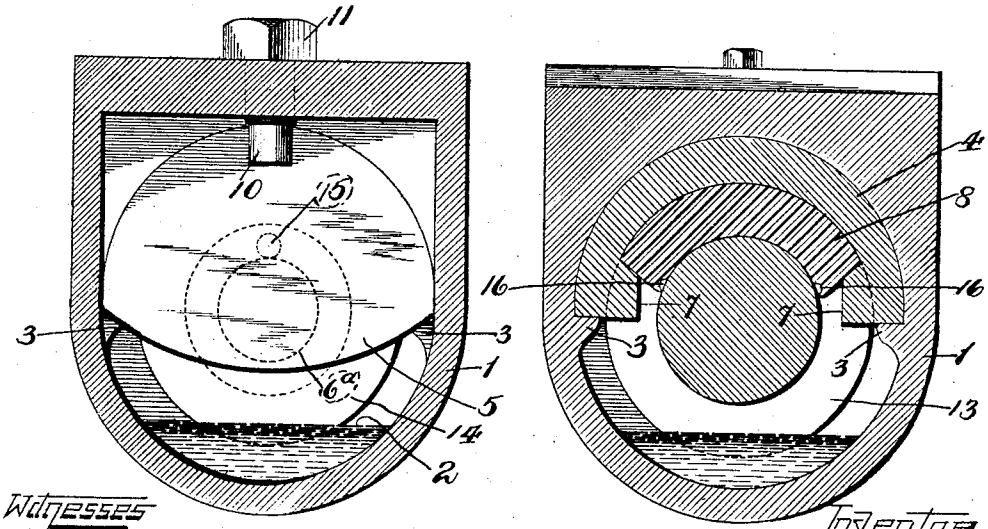
I. METZGER.

JOURNAL BEARING.

APPLICATION FILED APR. 29, 1901.

NO MODEL.





Witnesses

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UNITED STATES PATENT OFFICE.

ISBON METZGER, OF NEAR WINFIELD, IOWA.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 771,993, dated October 11, 1904.

Application filed April 29, 1901. Serial No. 57,857. (No model.)

To all whom it may concern:

Be it known that I, ISBON METZGER, a citizen of the United States, residing near Winfield, in the county of Louisa and State of Iowa, have invented certain new and useful Improvements in Journal-Bearings, of which the following is a full, clear, and exact specification.

My invention relates more particularly to journal-bearings for car-axles; and it has for its primary object to provide an improved and efficient form of axle and bearing which shall be capable of carrying a large supply of oil or lubricant and uniformly distributing the same over the wearing parts, while excluding dust and dirt from the bearings and preventing the escape of the lubricant.

A further object of my invention is to provide an improved device for holding the bushing and taking up the end thrust of the journal or spindle.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts by which the said objects and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a vertical longitudinal sectional view of my improved journal-bearing. Fig. 2 is a transverse section on the line 2 2, Fig. 1. Fig. 3 is a transverse section on the line 3 3, Fig. 1; and Fig. 4 is a detail perspective view of the end-thrust member hereinafter described, showing it in an inverted position and on a smaller scale.

1 is a car-axle box, which may be of the usual or any suitable construction, but which is provided at the bottom with an oil well or chamber 2 and along each of its side walls on the inside with longitudinal flanges 3. These flanges 3 are for the purpose of supporting the semicylindrical portion 4 of the end-thrust member, whose outer end has a depending lip or bearing member 5, which projects downwardly over and partially caps the end of the spindle or journal 6. The semicylindrical portion 4 of this member is likewise provided with internal longitudinal flanges or shoulders 7 on both sides thereof, and these latter serve for the support of a bushing 8, which is inserted longitudinally and accurately fits against the inner face of the semicylindrical portion 4 and rests upon the upper side of the journal or spindle 6. The semicylindrical member 4 takes its abutment at its inner end against a flange or abutment 9, depending from the top of the box 1, while it is held against longitudinal movement relatively to the box in the opposite direction by means of a removable lug 10, depending from the top of the box and held in place in any suitable way. In the example shown the lug 10 is formed on the lower end of a stout bolt 11, threaded through the top of the box in such a manner that its head will be accessible from the exterior and may be turned up or backed off when it is desired to remove the member 4 5 through the open end of the box. The inner end of the spindle 6, or that end which is adjacent to the axle 12, is provided with a peripheral flange 13, formed thereon or secured thereto in any suitable way and dipping into the oil-well 2, so as to elevate and distribute the lubricant over the upper side of the journal. This flange 13 forms an abutment for the inner end of the bushing 8 and holds the bushing against longitudinal movement in one direction relatively to the journal.

Secured on the journal at the outer end thereof and at a point between the outer end of the bushing 8 and the depending lip 5 is an oil-distributing ring or flange 14, which is adapted to revolve with the journal and elevate the oil to the upper side thereof, depositing the oil as it is carried up into the space between the inner face of the lip 5 and the outer or left-hand end of the bushing 8. For the accommodation of this oil-distributing ring 14 the end of the spindle is reduced, as shown at 6^a, forming a projection which limits the movement of the ring 14 toward the right, the movement of the ring in the opposite direction being prevented by the lip 5. The ring is compelled to revolve with the spindle 6 by means of a lug or pin 15 driven therethrough into the body of the spindle.

With a journal-bearing thus constructed it will be seen that the bushing 8 is completely

housed by the end-thrust member 4 5 and the flange 13, and should it break the particles will be accurately held in place on the upper side of the journal, thus enabling the bushing to be used a great length of time after it is broken.

The face of the bushing, if desired, may be provided on each side with inclined oil-ducts 16, extending upwardly from an intermediate point, so that the oil deposited by the flanges 13 14 at the ends of the bushing will be distributed throughout the length thereof.

17 is a dust-guard inserted in the rear end of the box and held in place in any suitable way, as by means of a cap 18, the axle, if desired, being provided with a flange 19, let into the dust-guard 17, as clearly shown in Fig. 1.

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

1. In a journal-bearing the combination of a box having longitudinal flanges or shoulders, a member inserted in said box and supported by said flanges or shoulders and itself having internal flanges or shoulders, a bushing inserted in said member and having its longitudinal edges supported by said internal flanges and a spindle on which said bushing is supported, substantially as set forth.

2. In a journal-bearing the combination of a box, a member, 4 5, held therein, a spindle over which said member is saddled and against a part of which member said spindle abuts, a bushing interposed between said member and spindle and a detachable flange on said spindle at one end of said bushing for holding the latter against longitudinal movement, said flange being held in place by the part of said member against which the spindle abuts, substantially as set forth.

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Witnesses:
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