

E. PECKHAM.
BEARING.

APPLICATION FILED MAR. 2, 1908.

905,355.

Patented Dec. 1, 1908.

FIG-1-

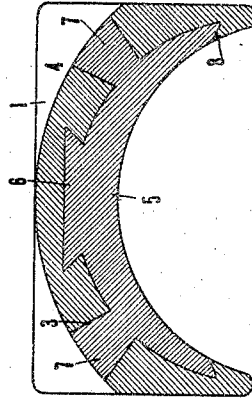
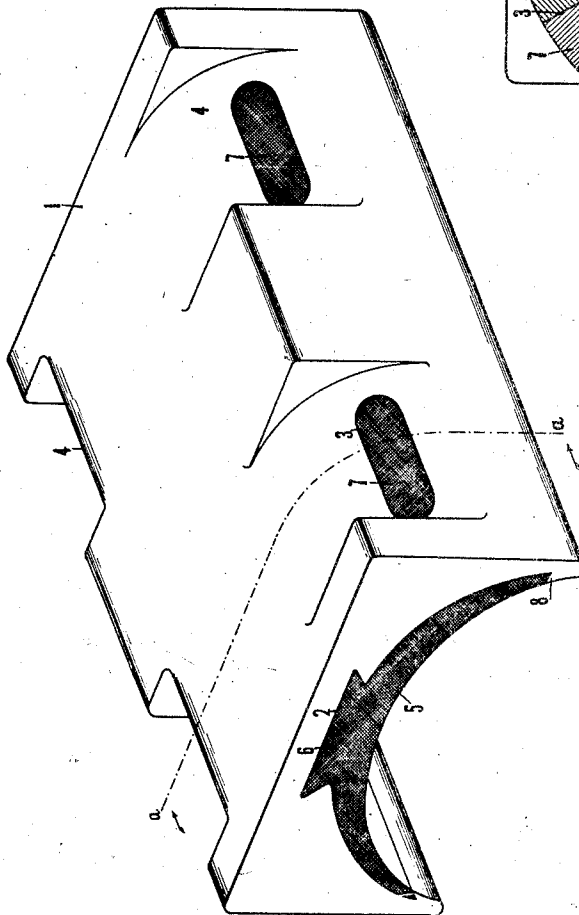


FIG-2-

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BEARING.

No. 905,355.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed March 2, 1908. Serial No. 418,678.

To all whom it may concern:

Be it known that I, EDGAR PECKHAM, a citizen of the United States, residing at Westminster, London, S. W., England, have
5 invented certain new and useful Improvements in Bearings, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

10 This invention relates to bearings, and more particularly to anti-friction metal bearings for the axles of railway cars, tram cars, or similar vehicles.

15 One of the objects of the present invention is to prolong the life of the bearing, thereby enabling a greater mileage to be obtained than has been possible in similar bearings as hitherto constructed.

20 Another object thereof is to provide a construction such that the bearing of anti-friction metal is more firmly secured within its casing or shell than is the case in bearings of this character now in use.

25 Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will
30 be exemplified in the construction herein-after set forth, and the scope of the application of which will be indicated in the following claim.

In the accompanying drawing, wherein is
35 illustrated one of the various possible embodiments of my invention, Figure 1 is a view in perspective showing the same. Fig. 2 is a view in cross-section taken on line *a-a* of Fig. 1.

40 Similar reference characters refer to similar parts in both views of the drawings.

Referring now to the drawings, 1 represents the outer shell or casing of the bearing which may be constructed of any suitable
45 material, such as, for instance, malleable iron, steel or brass. This casing is provided upon its inner surface and in the crown portion thereof with one or more longitudinally extending grooves 2, which are preferably
50 of dove-tail shape as clearly shown in the drawing. Casing 1 is also provided with one or more elongated apertures 3 in each of its side portions, as shown, the exterior sides of the casing being preferably provided with

depressions as at 4, through the bottom walls 55 of which apertures 3 extend.

The lining of the shell is constituted by a body of anti-friction metal 5, which has a plurality of tenons 6 and 7 which fit within the dove-tail recesses of the casing. These
60 tenons serve to firmly secure the body of anti-friction metal within the casing.

In order to prolong the life of the bearing and increase the mileage of the anti-friction metal, the arch of the shell is constructed to
65 have a different radius from that of the axle upon which the bearing is to be used, so that the anti-friction metal will have a considerably greater thickness in the crown of the arch of the shell where the weight of the load
70 is borne, than at its sides. In the present instance the construction is such that the thickness of the anti-friction metal is more than doubled in the crown portion of the arch of the casing, such construction thereby effect-
75 ing a corresponding increase of the life of the bearing and the mileage which may be obtained therefrom.

The anti-friction metal is mounted within the shell of the bearing by pouring the same
80 in liquid state thereinto so as to fill the dove-tail longitudinal grooves in the crown and side portions of said shell, which, in the present instance, has shoulders as at 8 in its lower portion, against which seat the lower
85 side portions of the anti-friction metal.

It will accordingly be seen that I have provided a construction well adapted to attain, among others, all the ends and objects above enumerated in a simple and efficient
90 manner. Heretofore it has been customary to first mold or form the casing in a shape desired and cover its inner surface with a solution of tin, after which the liquid anti-friction metal is poured uniformly over the
95 inner surface of the casing, the coating of tin being relied upon to unite the two metals. This construction, however, has proven ineffective to prevent the anti-friction metal from getting loose under the stress of the
100 pounding blows imparted to the bearing by the axle box and the end thrusts of the axle. By my construction, however, the body of anti-friction metal is more firmly secured within the casing, and is held fixedly
105 therein in such manner as to resist effectively the pounding blows imparted by the axle box, as well as the end thrusts of the axle.

By constructing the arch of the casing upon an arc of greater radius than that of the axle I am able to provide a greater thickness of the anti-friction metal in that portion of the bearing upon which the load is borne, thereby greatly increasing the life of the bearing and enabling the car or other vehicle equipped with the bearings to be run a relatively greater mileage without the necessity of replenishing the anti-friction metal in the bearing.

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

15 A bearing of the class described comprising a casing provided with a pair of oppositely disposed longitudinally extending shoulders, and having a longitudinally ex-

tending dove-tail shaped recess in the crown portion of its arch, a plurality of elongated 23 apertures in the side portion of its arch, and a body of bearing metal seated upon said shoulders and having portions thereof located within said recess, said bearing metal gradually increasing in thickness from its 25 edges toward the portion thereof located in the recess provided in the arch of the casing whereby the axle may utilize a portion of the bearing metal within said recess.

In testimony whereof I affix my signature, 30 in the presence of two witnesses.

EDGAR PECKHAM.

Witnesses:

D. EDWARD DAVIES,
WALTER FINNIS JOHNSON.