A. G. MEADEN.

JOURNAL BEARING.

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1,298,242. Patented Mar. 25, 1919.

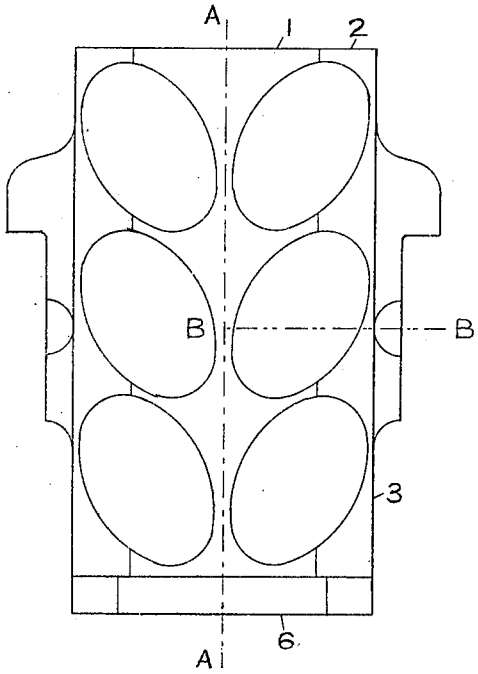

Fig. 1

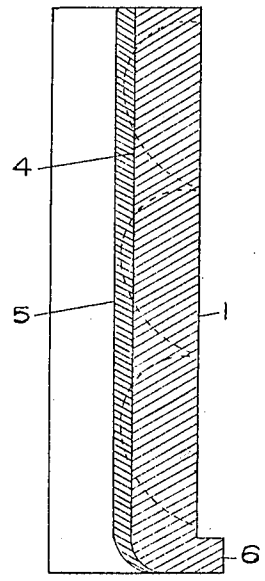

Fig. 3.

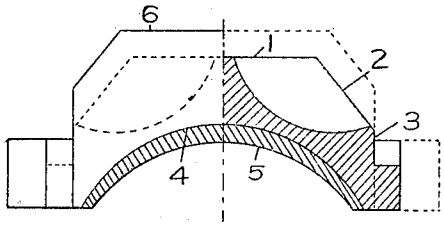

Fig. 2.

Inventor

Alfred George Meaden

By Harding A. Meaden

Attorney

UNITED STATES PATENT OFFICE.

ALFRED GEORGE MEADEN, OF MONTREAL, CANADA.

JOURNAL-BEARING.

1,298,242. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed January 24, 1918. Serial No. 213,443.

To all whom it may concern:

Be it known that I, ALFRED GEORGE MEADEN, a subject of the King of Great Britain and Ireland, residing in the city of Montreal, Dominion of Canada, have invented a new and useful Improvement in Journal-Bearings, of which the following is a full, clear, and exact description and specification thereof.

My invention relates to journal bearings for railway trucks and the like and more particularly to those consisting of a journal box, a brass and a wedge of the standard form as adopted by the Master Car Builders' Association.

Its object is to provide a journal bearing in which the brass is of an improved design in respect to lightness, cheapness, durability and strength.

The invention consists of a brass of the standard form and dimensions but having on its upper surface on both sides of the central line a series of ellipsoidal concavities arranged with their major axes slanting toward the flanged end of the brass as hereafter shown and described.

As the metal of which these brasses are constructed is both heavy and expensive, it is desirable to provide a brass of the least possible amount of metal commensurate with the necessary strength, wearing qualities and resistance to strain in any direction. Hitherto attempts have been made to lighten the brasses by cutting away portions of the upper surface but the effect has been to produce weakness in portions of the brasses if the weight was decreased to any considerable extent, while if sufficient strength was maintained, the decrease in weight was very slight.

By means of my peculiar construction I reduce the weight to a minimum without in any way decreasing the strength and resistance to strain and without producing any weakened parts.

Furthermore by reason of greatly decreasing the upper surface which is in contact with the wedge the brass is more easily and more cheaply machined and more readily adjusted.

Reference is made to the accompanying drawings in which.

Figure 1 is a top plan view.

Fig. 2 is in part an end view and in part a cross section on the line B—B of Fig. 1.

Fig. 3 is a longitudinal section on the line A—A of Fig. 1.

As the journal box and wedge are of standard type they will not be shown or described in detail.

The brass is of the standard type with upper surface 1, beveled edges 2, 2, and sides 3, 3. The lower surface 4 holds the antifriction metal lining 5 over the axle. The usual flange 6 extends across the end of the brass. On either side of the central line A—A of the surface 1, are a series of ellipsoidal concavities arranged in pairs having their major axes slanting inward toward the flanged end of the brass. These concavities are formed by suitable cores in the casting of the bearings. They extend from close to the central line A—A of the surface 1, to a short distance from the sides 3, 3 cutting away a large portion of the beveled edges 2, 2 but leaving sufficient bearing surfaces on the surface 1 and the edges 2, 2, to take the thrust of the load and distribute it evenly on the antifriction lining 5. These bearing surfaces consist of extended areas on the surface 1 and edges 2, 2, all connected together by narrow ridges between the adjacent concavities.

The oblique arrangement of the concavities prevents the existence of any weakened cross-section, while the ellipsoidal form of the concavities provides the greatest strength for the least amount of metal. The sides 3, 3 are in no way effected or weakened as the concavities do not extend as far as them.

I am aware that brasses with rectangular concavities having between them longitudinal and transverse ribs with vertical sides have been in use, but these produce both areas of strength and of weakness and do not distribute the load evenly to the antifriction metal.

What I claim, and desire to secure by Letters Patent, is:—

1. A journal bearing comprising a bearing member the upper surface and beveled portions of which are cut away by ellipsoidal concavities.

2. A journal bearing comprising a bearing member, the upper surface and beveled

portions of which are cut away by ellipsoidal concavities on either side of the central line.

3. A journal bearing comprising a bearing member, the upper surface and beveled portions of which are cut away by ellipsoidal concavities on either side of the central line and said concavities having their major axes slanting inwardly toward the flanged end of the member.

In testimony whereof I affix my signature.

ALFRED GEORGE MEADEN.

Witnesses:
HANBURY A. BUDDEN,
EMILY HAIL.