No. 826,202.

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A. STUCKI.

JOURNAL BEARING.

APPLICATION FILED JAN. 24, 1906.

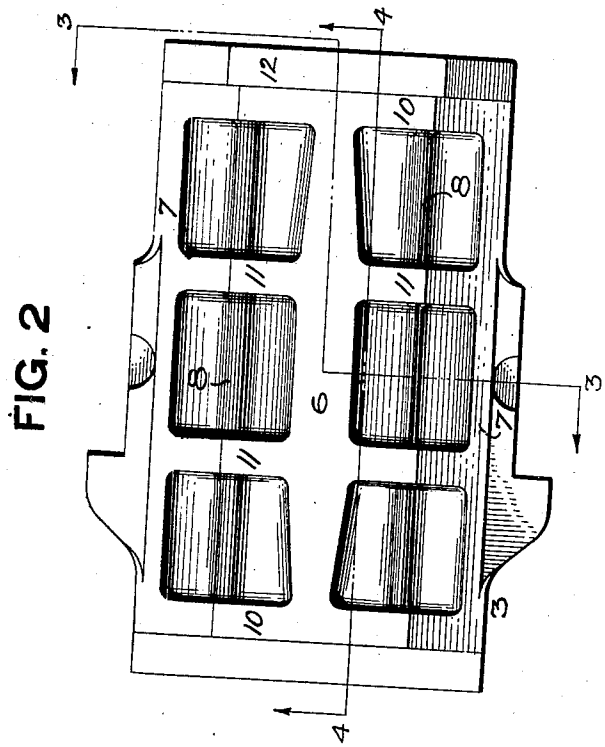

FIG. 2

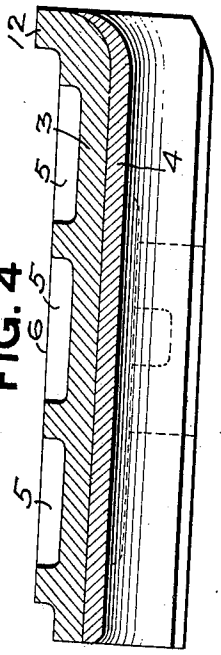

FIG. 4

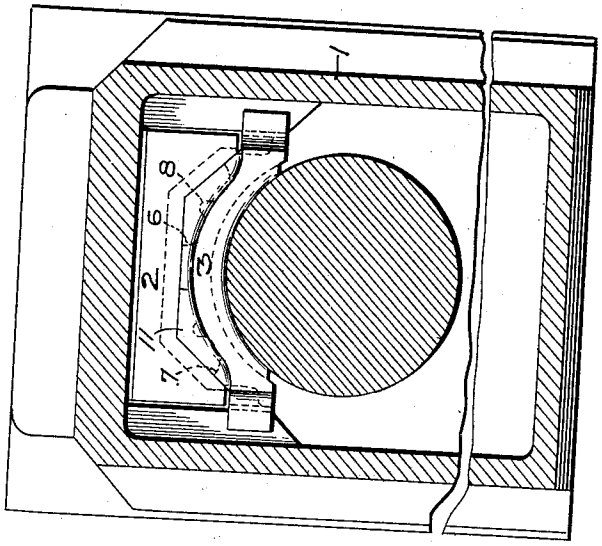

FIG. 1

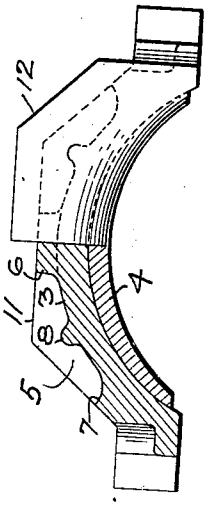

FIG. 3

WITNESSES.

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JOURNAL-BEARING.

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To all whom it may concern:

Be it known that I, ARNOLD STUCKI, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Journal-Bearings; and I do hereby declare the following to be a full, clear, and exact description thereof.

This invention relates to journal-bearings for railway-car trucks and similar purposes. Its object is to provide a journal-bearing which is cheaper, lighter, easier to handle than present journal-bearings, and which can be more easily fitted to the wedge, but which nevertheless is equally as strong and durable as those now in use.

The invention consists in a journal-bearing having on its outer or upper face reduced or cut-away portions so arranged as to leave ribs of the full height at the longitudinal center and both edges of the bearing and also at the ends and one or more points intermediate the same, which ribs give full strength and ample bearing-surface against the wedge and can be readily ground to fit the same.

Journal-bearings for railway-cars are constructed of phosphor-bronze or other metal suitably lined with an alloy of lead and antimony or other antifriction metal. These journal-bearings are set in the boxes and are backed by means of wedges. Phosphor-bronze is comparatively expensive; but the wedges are made of some strong but cheaper material, such as malleable iron or steel. It is the practice in many cases to cut away a part of the metal of the wedges, so that they contact with the bearings only at points or along certain lines. The Master Car-Builders' Association has adopted shapes and designs which must be adhered to in a construction of these parts. The ordinary journal-bearing weighs approximately twenty-five pounds and at the price of the phosphor-bronze is quite expensive. Furthermore, it is quite heavy, thus adding to the dead-weight of the truck, besides being difficult to handle. It is also quite difficult to fit to the wedge, inasmuch as its entire upper or outer face is in contact with the latter.

My invention is intended to improve journal-bearings of the character specified, so as to overcome the difficulties named. This is accomplished by the construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an end view of my improved journal-bearing and the wedge, showing the box in section. Fig. 2 is a top plan view of the bearing. Fig. 3 is in part an end view and in part a cross-section on the line 3 3, Fig. 2; and Fig. 4 is a longitudinal section on the line 4 4, Fig. 2.

In the drawings the journal-box is indicated in outline at 1 and the wedge at 2, the latter being of the Master Car-Builders' design. The journal-bearing itself comprises a body 3 of phosphor-bronze or some similar material having a lining 4 of tin and antimony or other antifriction material. The inner face of the journal-bearing is curved or concave in the usual way, and said bearing in cross-section approximates a semitubular shape. The outer surface instead of following the contour of the inner face of the wedge, as heretofore, has portions thereof reduced or cut away, as shown at 5. These reductions are formed by suitable cores in the casting of the bearings. The coring is done in such a way as to leave bearing-ribs which contact with the wedge and which have ample bearing-surface to take the thrust of the load and at the same time being designed to have ample strength against bending and other distortions. As shown, a bearing-rib 6 is provided at the longitudinal center of the bearing and similar bearing-ribs 7 at the edges thereof, the central and side ribs being in different horizontal planes. Intermediate these ribs are other ribs 8 of less height for stiffening the thin portions of the bearing. The central rib 6 is of varying width, being wider at its middle and tapering toward its ends, so as to give practically uniform strength from end to end. The ends of the bearing likewise are provided with ribs 10, and at one or more intermediate points transverse ribs 11 are provided. The bearing will be provided with the usual flange 12 and in general shape will conform to the Master Car Builders' designs.

By coring the upper face of the bearing, as shown, I effect a considerable reduction in the weight of a standard car journal-bearing, and as there usually are eight such bearings for each car it means a considerable saving in cost, as well as in the dead load of the truck. The wedge, however, is left of the usual shape and strength. In fitting the bearing to the wedge the contacting ribs alone need to be ground or machined, thus making it easier and cheapening this operation in the manufacture. The inner face of the journal-bear-

ing is concave and is left solid. This is very important, so that even if the antifriction metal should entirely wear away there will be a full contact with the journal of the axle.

What I claim is—

1. A journal-bearing for railway-cars comprising a bearing member having on its outer face reduced or cut-away portions so arranged as to leave ribs of full height at the longitudinal center and both edges and transversely of said member, the central and side ribs being in different horizontal planes.

2. A journal-bearing for railway-cars having on its outer face reduced or cut-away portions so arranged as to leave ribs of full height at the longitudinal center and both edges of the bearing, and longitudinal ribs of less height intermediate the center and side ribs.

3. A journal-bearing for railway-cars having on its outer face reduced or cut-away portions so arranged as to leave ribs of full height at the longitudinal center and both edges and transversely of the bearing, said central rib tapering from its middle toward its ends and being in a different horizontal plane than the side ribs.

4. A journal-bearing for railway-cars having on its outer face reduced or cut-away portions so arranged as to leave ribs of full height at the longitudinal center, both edges, and at the ends of said bearing, the central and side ribs being in different horizontal planes.

5. A journal-bearing for railway-cars having on its outer face reduced or cut-away portions so arranged as to leave ribs of full height at the longitudinal center, both edges, and at the ends of the bearing, and one or more transverse ribs intermediate its ends, the central and side ribs being in different horizontal planes.

6. A journal-bearing for railway-cars having on its outer face reduced or cut-away portions so arranged as to leave ribs of full height at the longitudinal center, at both edges, and at the ends of the bearing, said central rib being wider at its middle and tapering toward its ends and being in a different horizontal plane than the side ribs.

7. A journal-bearing for railway-cars having on its outer face reduced or cut-away portions so arranged as to leave center, side, end, and transverse ribs of full height, and other ribs of less height intermediate the longitudinal ribs.

In testimony whereof I, the said ARNOLD STUCKI, have hereunto set my hand.

ARNOLD STUCKI.

Witnesses:

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