(No Model.)

S. J. SHIMER.

JOURNAL BEARING.

No. 486,199. Patented Nov. 15, 1892.

Fig. 1.

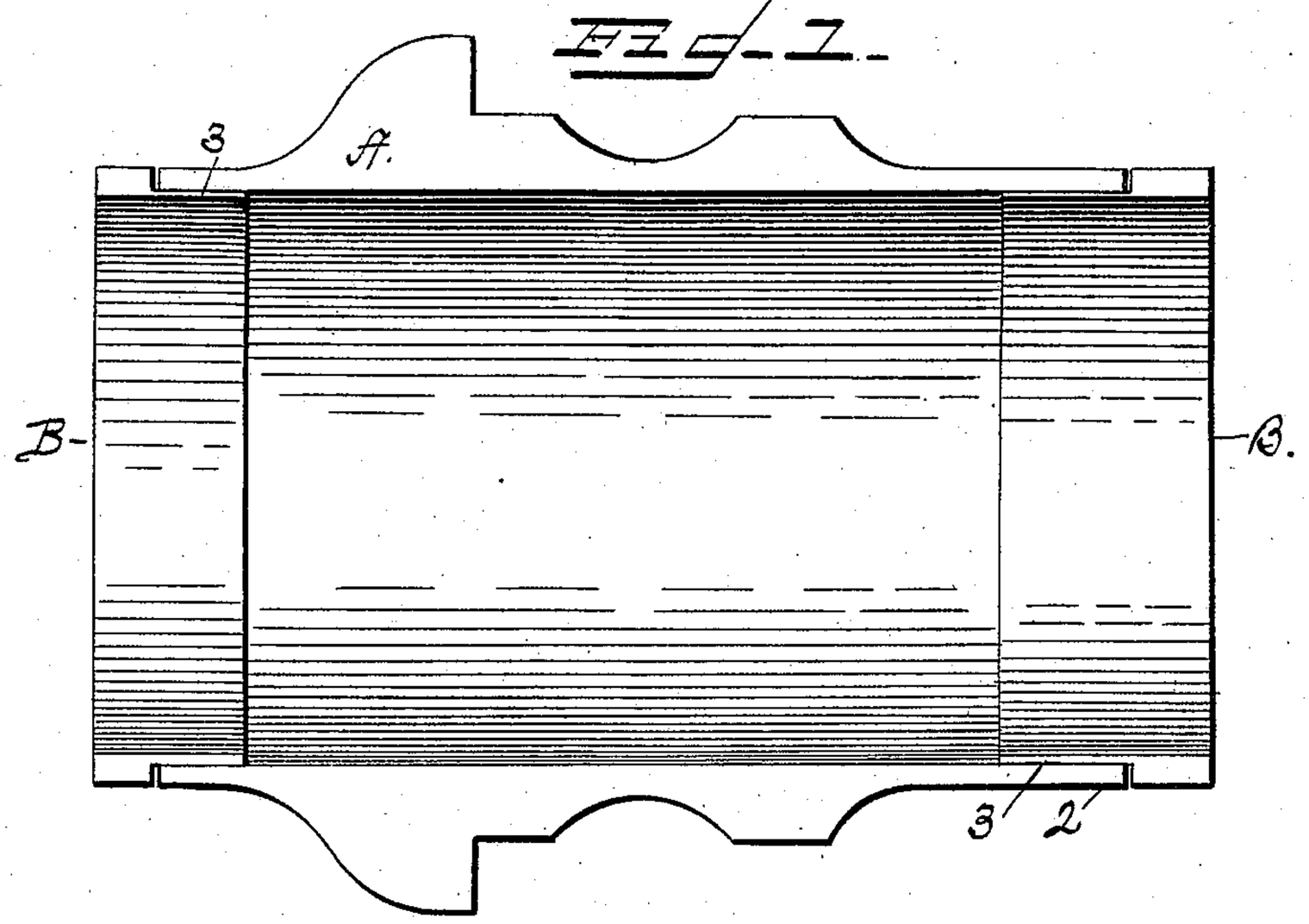


Fig. 2.

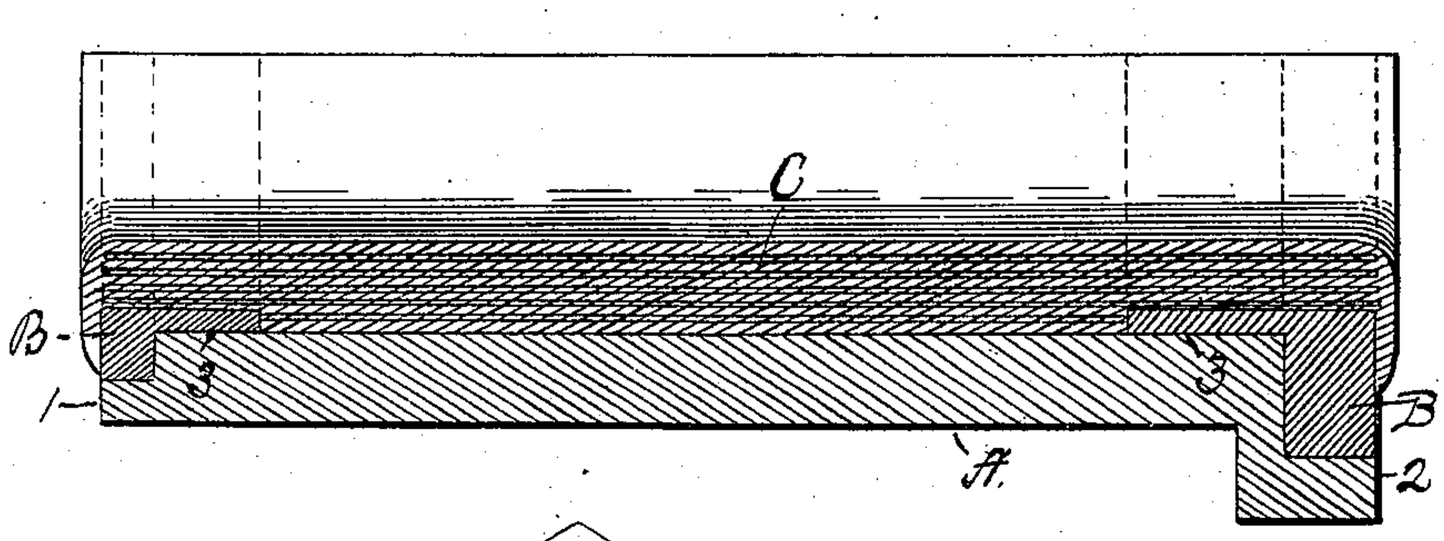


Fig. 3.

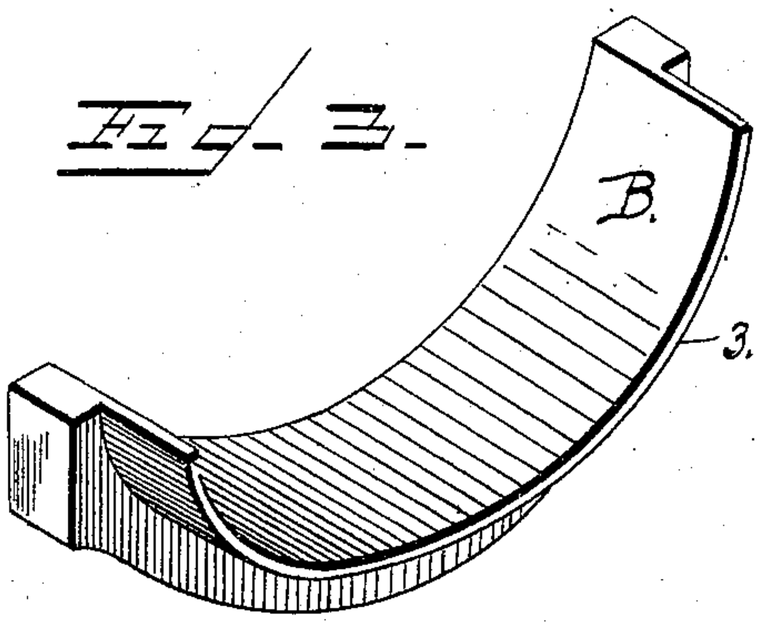
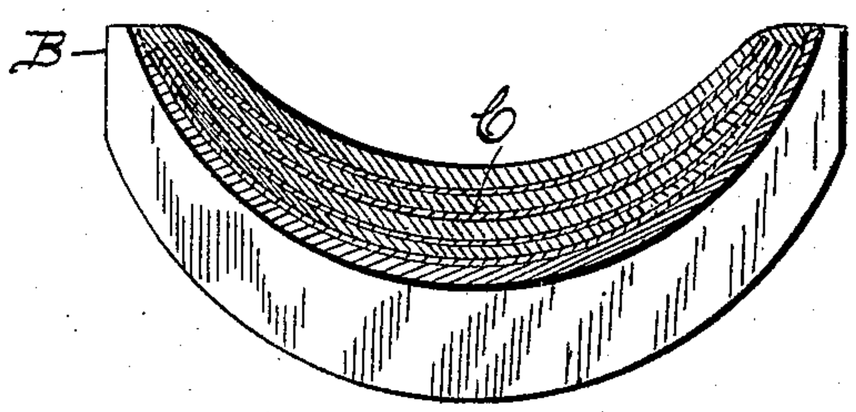


Fig. 4.



WITNESSES

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JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 486,199, dated November 15, 1892.

Application filed December 21, 1891. Serial No. 415,762. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. SHIMER, a citizen of the United States of America, residing at Milton, in the county of Northumberland and State of Pennsylvania, have invented certain new and useful Improvements in Journal-Bearings, of which the following is a specification.

My invention consists in certain novel details of construction, as will be hereinafter described, and as the same is particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a top plan view of the bearing having the end pieces applied without the metal filling or covering. Fig. 2 is a central longitudinal section showing the metal filling applied. Fig. 3 is a detail of one of the end pieces. Fig. 4 is a transverse section of the same.

It is the purpose or object of my invention to provide a journal-bearing wherein the main box is formed with projecting end flanges extending substantially the width of the box, constituting supports for short or narrow brass or bronze end pieces and provided with a bearing-metal filling or covering over the whole bearing-surface of the box and end pieces. These end pieces are made of brass or bronze or other fine bearing-metal and the main box made of malleable iron and then a filling inserted or filled in, covering the whole bearing-surface of the box.

Referring to the drawings, A designates the shell or box of the bearing, which is made of the usual approved construction and contour to carry a journal or take an axle. At the respective ends of the box A are formed projecting end flanges 1 2, arranged below the face of the bearing and extending the width of the box and constituting supports for the brasses or end pieces hereinafter described.

B designates the brass end pieces, consisting of curved or circular bars or pieces of brass or bronze adapted to rest on the end flanges of the box or part A, as seen in Figs. 1 and 2 of the drawings. These end pieces are provided with lateral edge flanges 3, extending along the curve of the brass and projected inward and adapted to rest on the face of the part A, as shown, so that when the end pieces are laid in the seats or flanges of the part A they may be secured therein by the filling or first secured by rivets through the flanges 3 and box and then the filling applied. The flanges 3 extend the width of the bars D and reach a distance over the body-surface of the box and across its width. The upper surfaces of the flanges 3 are coincident with the upper surfaces of the ribs or end pieces B, so that a large and extended bearing-surface of good metal is provided for the journal when the softer filling is reduced by wearing. This arrangement of the end pieces, it will be perceived, not only gives the required superficial bearing-surface at the ends of the box and for a distance over the body of the box, but the outer faces thereof when the covering wears off will also serve as a proper bearing or wearing surface for the side faces of the collar and shoulder on the journal or axle. Hence the depth or vertical width of the end pieces is carried down far enough to give wearing-surface to such collar and shoulder.

C designates the filling, constituting the wearing-surface of the bearing. This may be of any proper material; but I prefer to make it of layers or folds of hard metal provided with a softer-metal filling and covering.

The advantages of the construction embodied in the invention are: The brass or bronze end pieces and the hard-metal base make the construction a strong and cheap one, much cheaper than an all-brass box, and at the same time a bearing is provided wherein all the advantages of a brass box are attained, since the journal or axle cannot reach a bearing-surface on hard metal. The bearing is readily and easily repaired and at less expense than that attending ordinary boxes, since should the soft-metal filling need replacing it can easily be supplied and should the brasses become broken and worn the metal box can be utilized for new brasses and new filling. Should the filling at the ends of the box over the brasses wear down to uncover the brasses, the axle will still run on fine metal at the ends and in the center of the axle will still run on a bed of soft bearing-metal.

The great wear of the collar and shouldrr on a car-axle on the ends of the bearing-boxes eventually results in the making of circular recesses in the end faces of the boxes and the boxes thus rendered useless. To these worn-out boxes my improved end pieces can be

readily fitted and applied and the filling put in, and the body of the old box thus utilized. These end pieces may also be applied to any journal-box, and for these reasons I have claimed them as a new article of manufacture.

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

In a journal-box, the combination of the main box A, formed with projecting end flanges 1 2, arranged below the bearing-surface of the box and extending the width thereof, the end pieces B, adapted to set on the end flanges of the box and formed with inwardly-directed edge flanges 3, having their upper surfaces coincident with the surfaces of the end pieces and extending the width of the box and adapted to rest on the surface of the box, and a filling covering the box-surface and the end pieces, substantially as described.

In witness whereof I have hereto set my hand in the presence of two attesting witnesses.

SAMUEL J. SHIMER.

Witnesses:

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A. G. HEYLMUN.