No. 829,170. PATENTED AUG. 21, 1906.

J. S. PATTEN.

BRASS FOR JOURNAL BOXES.

APPLICATION FILED AUG. 4, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

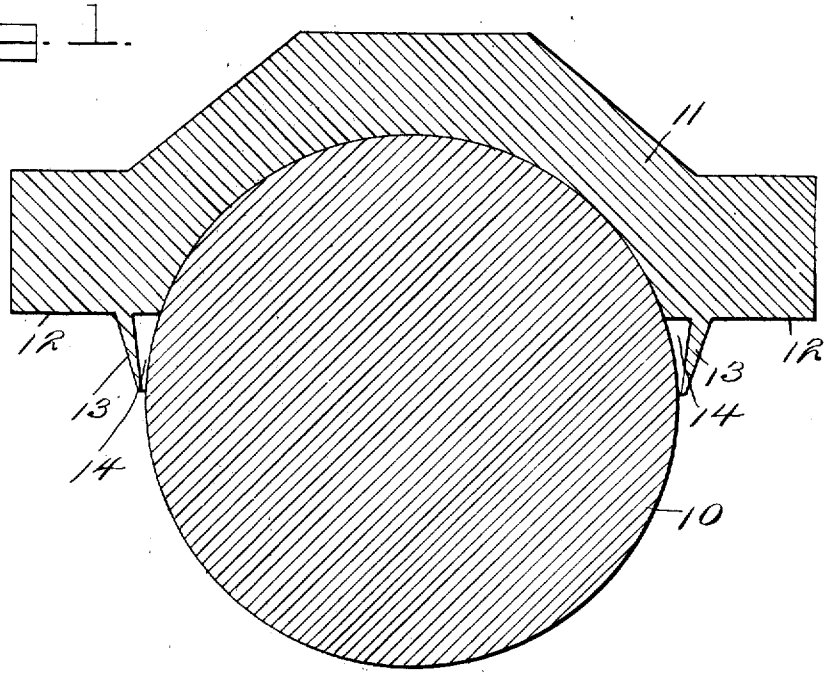
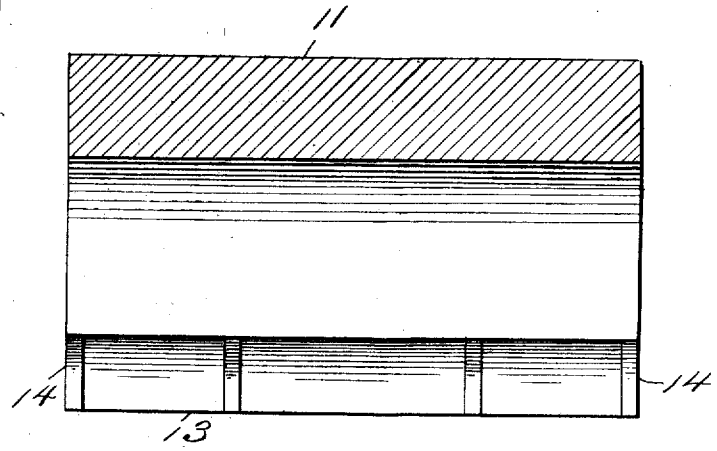


Fig. 2.



Witnesses

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3 SHEETS—SHEET 2.

Fig 3.

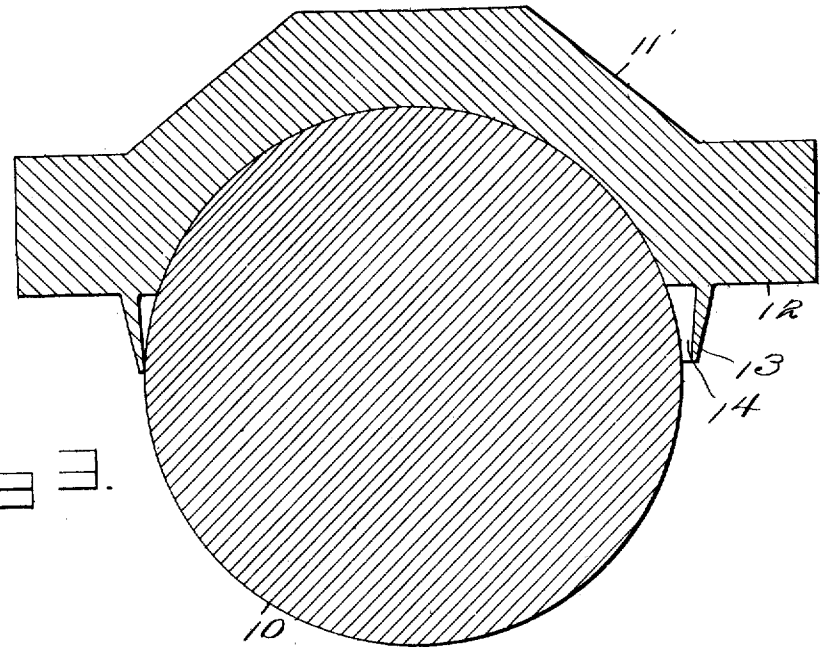
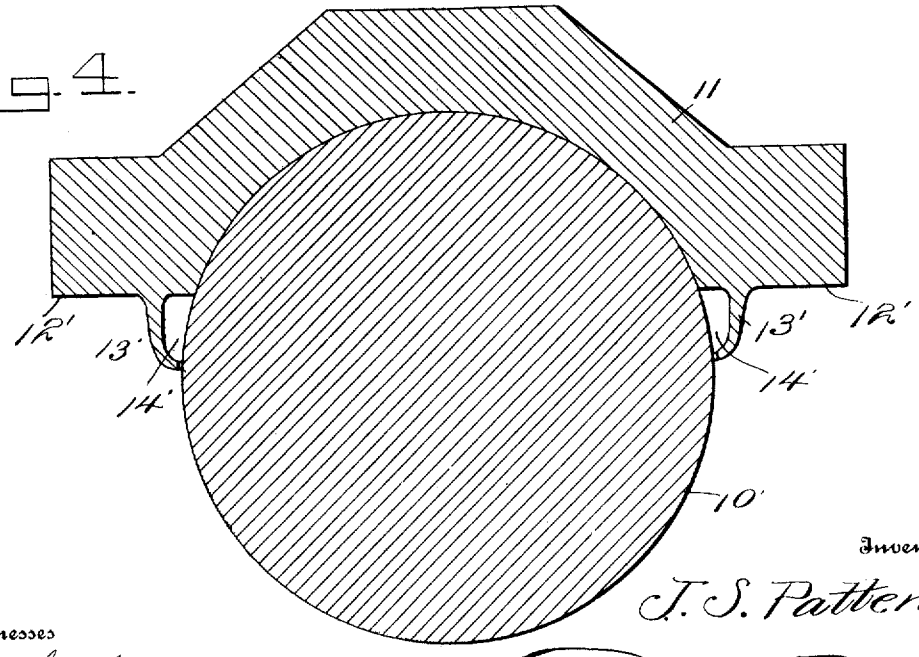


Fig. 4.



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3 SHEETS—SHEET 3.

Fig. 5.

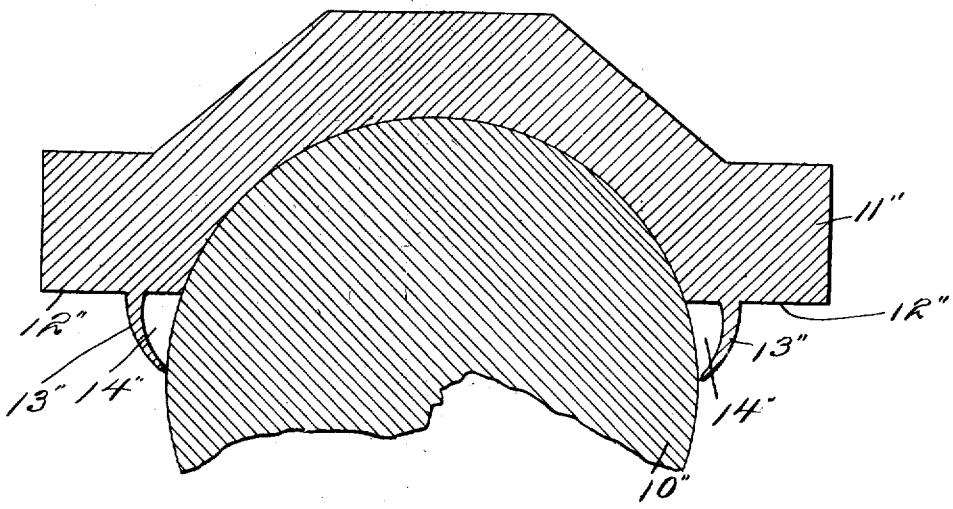
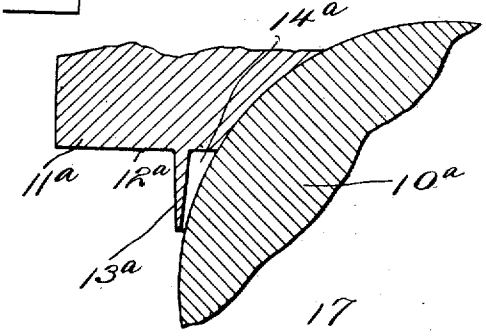


Fig. 6.



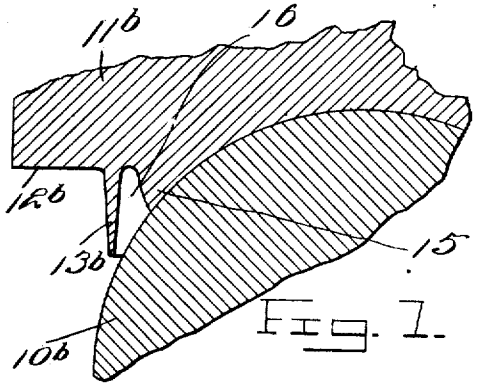


Fig. 7.

Fig. 9.

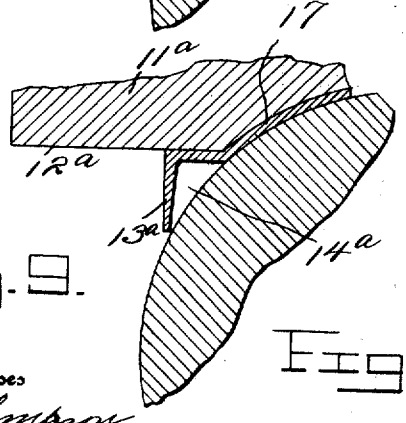
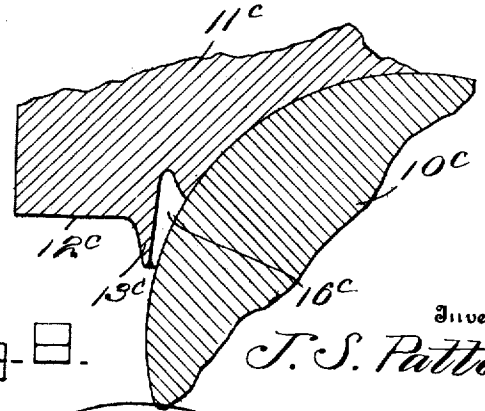


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES S. PATTEN, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE BALTIMORE JOURNAL BOX COMPANY, OF BALTIMORE, MARYLAND, A CORPORATION OF MARYLAND.

BRASS FOR JOURNAL-BOXES.

No. 829,170. Specification of Letters Patent. Patented Aug. 21, 1906.

Application filed August 4, 1905. Serial No. 272,661.

To all whom it may concern:

Be it known that I, JAMES S. PATTEN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Brasses for Journal-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to journal-bearings, and more particularly to the portions thereof that receive the direct wear of the journals and are commonly known as the "brasses" or "babbitts," for the reason that they are usually formed of brass or Babbitt metal.

In the use of journals that directly support the load, as in the case of car-axle journals, lubricating-oil is fed from below to the face of the journal and is carried upwardly by the latter and between it and the brass, the excess of oil being scraped off from the journal by the brass and passing along the lower face of the latter to the side walls of the journal-box and thence downwardly to the bottom of the box or to the waste therein. It is the object of the present invention to arrest this excess oil and return it to the face of the journal directly adjacent to the bearing-face of the brass, so that efficient lubrication of the journal will be insured.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a transverse section taken vertically through the journal of the car-wheel axle and a brass thereon embodying the present invention. Fig. 2 is a vertical section taken longitudinally through the brass. Fig. 3 is a view similar to Fig. 1, illustrating the position of the brass after a certain amount of wear has taken place. Fig. 4 is a view similar to Fig. 1, showing a modification. Fig. 5 is a view similar to Fig. 1, showing a further modification. Figs. 6, 7, 8, and 9 are detail sectional views through portions of journals and brasses illustrating further modification.

Referring now to the drawings, and more particularly to Figs. 1, 2, and 3 thereof, there is shown a journal 10 of a car-wheel axle, upon which is disposed the usual bearing-brass 11, that is the same in every respect as the ordinary brass, with the exception that from the lower face 12 at each side of the journal there depends a flange 13, the upper edge portion of which is spaced from the side of the journal, while the lower edge portion thereof lies in close relation to the journal, the flange itself being slanted to some degree, so that it gradually approaches the center of curvature of the bearing-face of the brass. At each end of the flange 13 is a wall 14, that extends at right angles to the flange and throughout the height of the latter, and which wall contacts directly with the face of the journal.

In practice the oil that is carried up by the journal has its excess scraped off from the journal by the action of the brass pressing upon the journal, and this excess oil passes along the lower face of the brass away from the journal until it strikes the flange 13, and it then passes downwardly along the flange and drips back against the face of the journal. The actual result is that the entire space bounded by the lower face of the brass, the flange 13, end walls 14, and the curved face of the journal fills with oil, so that a body of oil is held in direct contact with the face of the journal directly below the brass and results in a most efficient lubrication. Furthermore, it is found that the flanges 13 serve to arrest movement of the waste with the journal and prevents the objectionable conditions resulting therefrom. As the brass gradually wears to one side or the other the corresponding flange is brought finally into contact with the face of the journal; but inasmuch as the point of contact is almost as low as the axis of the journal the pressure of the lower edge portion of the flange against the journal is much lighter than the pressure of the brass against the journal, and in consequence a quantity of oil is permitted to pass upwardly beyond the flange that could not pass under the brass.

In Fig. 4 of the drawings the brass 11′ is provided with flanges 13′, that depend vertically from the under face 12′ of the brass at their upper portions and then curve abruptly toward the journal 10′ at their lower portions, there being walls 14′ at the ends of the flanges 13′. Both the walls 14 and 14′ are spaced slightly from the ends of the brass, so as not to contact with the collars of the journal, which would result in wear that would per-

mit the oil to leak out of it at the ends of the pockets.

In Fig. 5 of the drawings the brass 11″ is provided with depending flanges 13″ at its lower face 12″ at each side of the journal 10″. The flanges 13″ curve in the direction of the journal throughout their heights, and at their ends are walls 14″.

In Fig. 6 of the drawings the brass 11^a is illustrated as provided with a vertical depending flange or web 13^a from its face 12^a, said flange lying with its lower end in close proximity to the journal 10^a, there being a wall 14^a at each end of the flange in practice.

In the structure illustrated in Fig. 7 the brass 11^b continues in contact with the journal 10^b below the lower face 12^b of the brass at each side of the journal, as shown at 15, and beyond this portion 15 is a depending flange or web 13^b, so that there is formed a recess 16, extending upwardly into the brass to hold the oil.

In Fig. 8 of the drawings the brass 11^c is provided with the flange 13^c, depending from its lower face 12^c, and the brass between the flange and the journal 10^c is recessed, as shown at 16^c.

Instead of the flange in each instance being formed of the brass itself the usual Babbitt lining 17 of the brass 11^d may be continued along the lower face 12^d at each side of the journal and then downwardly to form the flanges 13^d, these flanges having the end walls 14^d. The actions of the several structures are the same.

What is claimed is—

1. A brass for journal-boxes having a depending flange at each side of its bearing-face, a wall at each end of each flange, the space between said walls being divided into compartments.

2. A brass for journal-boxes having a flange depending from its lower face at each side of its concavity and gradually and continuously approaching the journal in an outward direction 5 the upper edge of the flange being spaced from the curvature of the concavity of the brass and the lower longitudinal edge of each flange lying in close relation to the curvature of the concavity of the brass, each of said flanges extending from end to end of the brass and terminating at each end at a wall disposed to prevent flow of oil from off the end of the flange.

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

JAMES S. PATTEN.

Witnesses:

JAS. H. BLACKWOOD,

E. M. COLFORD.