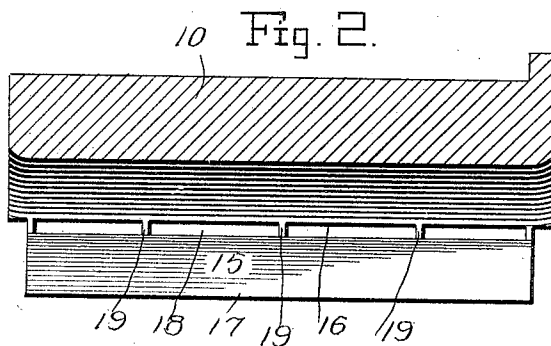
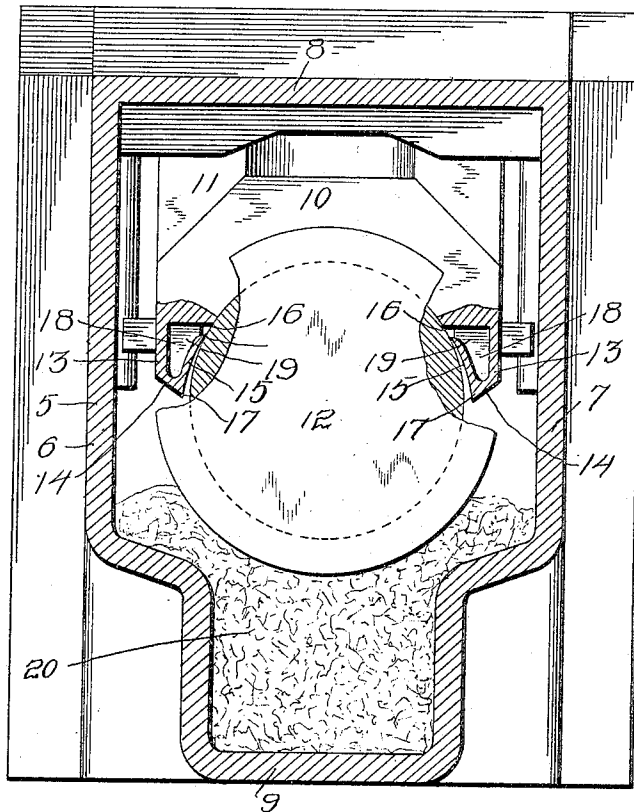


No. 822,762.

PATENTED JUNE 5, 1906.

J. S. PATTEN.
BRASS FOR JOURNAL BOXES.
APPLICATION FILED AUG. 4, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

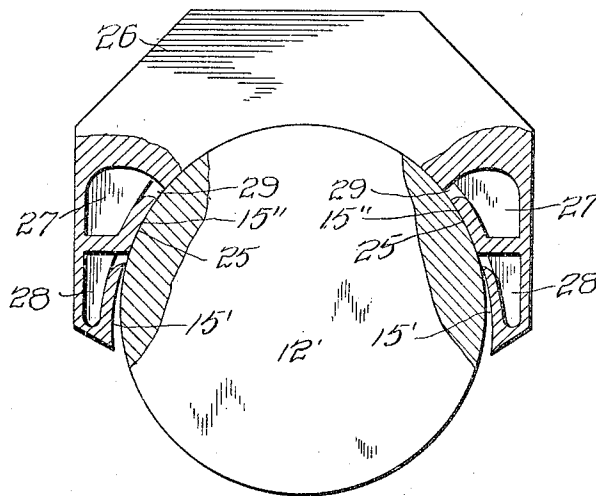
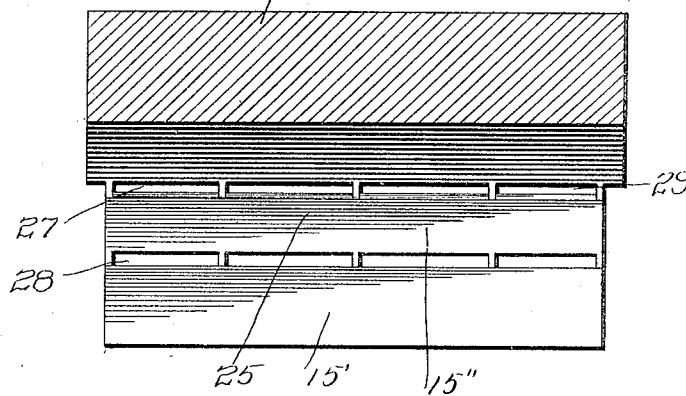


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BRASS FOR JOURNAL-BOXES.

No. 822,762.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed August 4, 1905. Serial No. 272,662.

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 catch and hold 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. The desired result is obtained by forming in the brass one or more oil-receiving pockets, so arranged that they will intercept the oil in its flow away from the journal, and when the pocket or pockets have been filled to overflowing the overflow oil will pass directly to the journal instead of to the bottom of the box by the usual course. Furthermore, the intercepted oil is permitted to settle more or less in the oil pocket or pockets, so that the fine particles of material that wear off from the contacting surfaces will be separated by the oil through the process of sedimentation instead of passing into the waste.

Other objects and advantages of the invention will be understood from the following description.

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 through

a journal-box for cars having a brass embodying the present invention. Fig. 2 is a longitudinal section through the brass illustrated in Fig. 1, showing the oil-pocket. Fig. 3 is a view similar to Fig. 1, illustrating a second form of the invention. Fig. 4 is a view similar to Fig. 2, illustrating the structure shown in Fig. 3.

Referring now to the drawings, there is shown a common form of journal-box 5 for car-axles in a brass for which the present invention is illustrated as embodied, it being of course understood that the invention may be embodied in brasses for other specific styles of journal-boxes. In the journal-box, which comprises side walls 6 and 7, a top 8, and a bottom 9, is disposed an upper brass 10, which is held between the usual wedge 11 and the journal 12.

In the structure illustrated in Figs. 1 and 2 of the drawings the extreme side portions of the brass are continued downwardly, as shown at 13, then inwardly, as shown at 14, in the direction of the journal 12 and into close proximity thereto and then upwardly, as shown at 15, and toward the face of the journal to a point spaced slightly below the lower face 16 of the brass proper or body of the brass and almost, but not quite, touching the journal 12. At the line of jointure of the portions 14 and 15 there is formed a longitudinal depending drip-flange 17, that is spaced only slightly from the face of the journal 12. The portions 13, 14, and 15 form a pocket 18, that opens in the direction of the journal 12 between the face 16 and the upper edge of the portion 15, which pocket may be divided by vertical partitions 19 to form a series of compartments.

In the bottom of the journal-box is a packing 20 of waste which feeds the lubricating-oil to the face of the journal 12. In use the lubricating-oil that is fed to the journal 12 is carried by it upwardly between it and the wall 15 of the corresponding oil-pocket to the brass 10. In order to insure an efficient lubrication under the varying conditions of use, the oil must be supplied from the waste to the journal in excess—that is, in greater quantity than can pass with the journal under the wearing-face of the brass—and in the ordinary construction the excess of oil is scraped off from the journal and passes along the bottom

face of the brass to the side wall of the journal-box and then downwardly to the waste. This excess of oil is contaminated to a greater or lesser extent by fine particles from the journal and brass that wear off from the latter, so that when the waste is removed from the journal-box it is found to be weighted with grit and other objectionable matter. With a brass constructed in accordance with the present invention, as above illustrated, the excess oil passes into the corresponding oil-pocket. The pocket soon fills with oil, and the impurities in suspension settle to the bottom of the pocket. After the pocket has become filled with oil the excess runs over the edge of the pocket onto the face of the journal. Thus the pocket acts to supply and hold a body of oil against the face of the journal directly adjacent to the brass, so that the highest efficiency of lubrication is insured at all times. Such oil as may follow down the outer face of the wall 16 of the oil-pocket drips from the flange 17 onto the waste close to the journal, so that the waste next to the journal is kept in a highly-saturated condition constantly.

In the construction shown in Figs. 3 and 4 of the drawings there are illustrated a plurality of oil-pockets at each side of the journal, one of the oil-pockets being above the other and separated therefrom by the bearing-face 25 of the brass. The upper pocket at each side of the brass 26 is indicated at 27, while the lower pocket is indicated at 28. To accommodate the two pockets at each side of the brass and allow for the opening 29 of the pocket 27, while insuring the proper area of bearing-face, the brass is made in the structure illustrated to extend downwardly slightly more than the structure shown in Figs. 1 and 2. The wall 15' has the same position with respect to the journal 12' as has the wall 15 with respect to the journal 12 above described. The wall 15'', however, of each of the pockets 27 touches the journal with its face 25. In practice the pockets 27 fill with oil, and a body of oil of the full width of the opening 29 is thus held in contact with the face of the journal.

What is claimed is—

1. A brass for journal-boxes having an oil-holding pocket opening through its face that contacts with the journal, the opening of the pocket extending longitudinally of the journal with the brass directly adjacent said opening in position to lie close against the

journal, to direct oil in the pocket from the face of the journal.

2. A brass for journal-boxes having an oil-pocket in its face that contacts with the journal, the face of the brass at one side of the pocket in the direction of curvature of the face being spaced farther from the center of curvature than the contacting face of the brass.

3. A brass for journal-boxes having an oil-pocket extending inwardly through the contacting face of the brass and then downwardly, the face of the brass below the opening of the oil-pocket being positioned to lie out of contact with but in close proximity to a journal in contact with the brass above the oil-pocket.

4. A brass for journal-boxes having an oil-holding pocket extending inwardly through the contact-face of the brass and then downwardly, said inwardly-extending portion being at such an angle as to permit of the flow of oil from the journal therethrough to the downwardly-extending portion.

5. A brass for journal-boxes having an oil-holding pocket opening only through the face that contacts with the journal, said opening extending longitudinally of the journal and leading from the journal in a direction to permit the flow of oil thereinto from the face of the journal.

6. A brass for journal-boxes having an oil-holding pocket opening through the face of the brass that contacts with the journal, the face of the brass at one side of the pocket in the direction of curvature of the contacting face gradually receding from the center of curvature of said contacting face.

7. A brass for journal-boxes having an oil-holding pocket opening through the face of the brass that contacts with the journal, the face of the brass at one side of the pocket in the direction of curvature of the contacting face gradually receding from the center of curvature of said contacting face, and terminating in the drip-flange.

8. A brass for journal-boxes having an oil-pocket formed in its face that contacts with the journal, said oil-pocket being divided into sections longitudinally of the brass.

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

JAMES S. PATTEN.

Witnesses:

JAS. H. BLACKWOOD,
E. M. COLFORD.