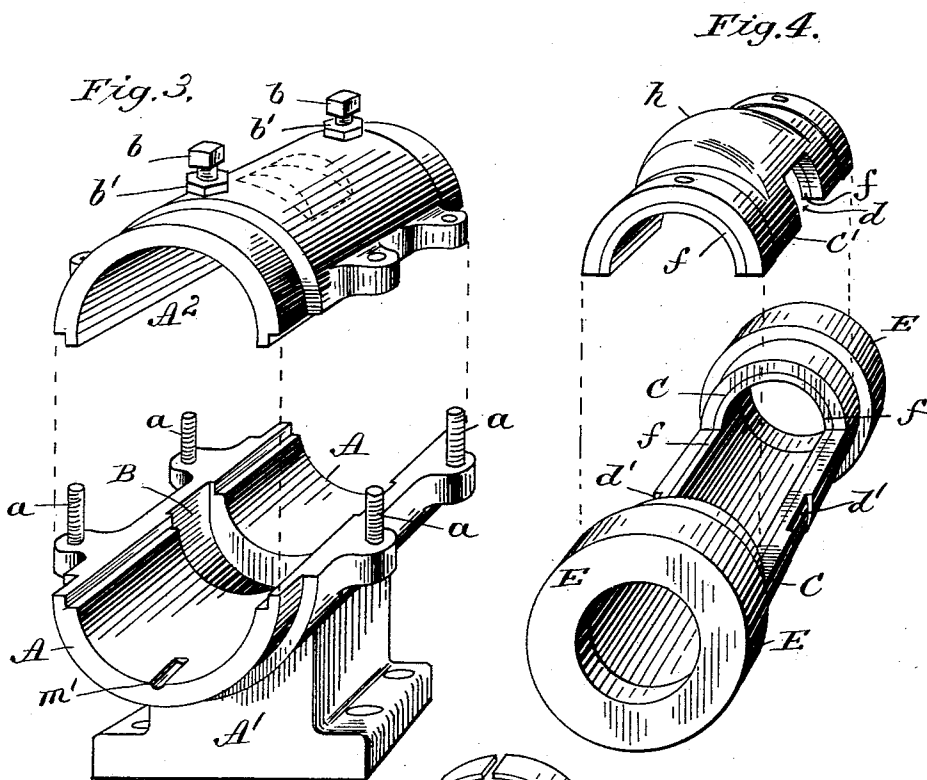
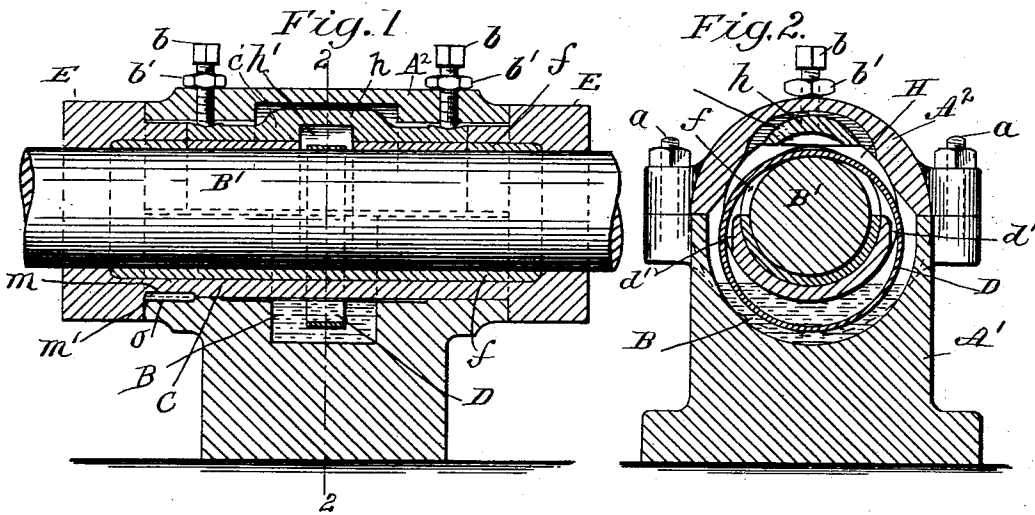


(No Model.)

P. J. WESTPHAL.
JOURNAL BEARING.

No. 573,738.

Patented Dec. 22, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

PETER J. WESTPHAL, OF HOLYOKE, MASSACHUSETTS.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 573,738, dated December 22, 1896.

Application filed May 2, 1896. Serial No. 589,984. (No model.)

To all whom it may concern:

Be it known that I, PETER J. WESTPHAL, a citizen of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Journal-Bearings, of which the following is a specification.

This invention relates to journal-bearings, and more especially to those for grinding-machines, &c., the object of the invention being to provide a bearing the wear of which can be taken up without exposing the running-surfaces, which surfaces are self-oiling; and the invention consists in the novel construction of said journal-bearings, as fully described in the following specification and pointed out in the claim.

In the drawings forming part of this specification, Figure 1 is a longitudinal sectional elevation of journal-bearings embodying this invention. Fig. 2 is a sectional end elevation of the same on line 2 2, Fig. 1. Fig. 3 is a perspective view of the outer case of the journal-bearing and its cap. Fig. 4 is a perspective view of the inner sleeve and cap contained in said case, and Fig. 5 is a perspective view of the metal lubricating-ring.

All reference-letters refer to like parts in the various figures of the drawings, in which—

A is the lower half of the outer case of the journal-bearing, provided with the base A', and A² is the cap for said outer case A, to which it is secured in the usual manner by bolts *a*. About midway between the ends of said case and extending into the base A' is the oil-reservoir B, from which oil is continuously fed to the bearing-surfaces while the shaft B' within the journal-bearing is in motion, as will be fully described farther on.

The journal-bearing proper is illustrated in Fig. 4 and consists of the sleeve C, the upper portion of which is cut away between the ends E E, as shown. Said ends E E are circular and are made larger in diameter than the sleeve C, forming thereby flanged ends of said part C, the distance between which is equal to the length of the outer case A, to the end that said flanged ends may prevent any endwise movement of the sleeve C therein. A cap C' (shown in Fig. 4) is provided for said sleeve C, which cap bears on the shaft

B' within the said sleeve, as usual. About midway between the ends of said cap C' is a raised portion or boss *h*, having the annular groove *h'* therein on the under side thereof, and a portion *d* of the sides thereof in line with said groove *h'* is also cut away, similar grooves *d'* within the sides of the sleeve C, coinciding with said portions *d*, being also provided, whereby there is formed an annular passage-way H around the upper portion of the shaft B' under said cap C'. Within said passage-way H and suspended on the upper surface of said shaft is the metal oil-feeding ring D, which encircles said shaft and the sleeve C and without touching said sleeve extends down into the oil-reservoir B. By means of the contact of said ring D with the shaft the latter, by its rotary movement, causes the said ring to rotate with more or less speed with said shaft, whereby the oil adhering to its surface is applied to the surface of the said shaft.

As aforesaid, the cap A² of the case A is secured to said case by bolts *a* in the customary way, but said cap does not at any point touch the inner cap C' of the sleeve C, a portion of its inner surface being cut away to receive the boss *h* on the cap C', which projects above the surface of said cap. Near each end of said cap A² are two set-screws *b*, provided with the jam-nuts *b'*. Said set-screws are designed to pass through said cap A² and bear upon the upper surface of the inner cap C', whereby any adjustment of said cap C' may be made without removing the cap A² of the case A.

In order that the sleeve C may be held against possible rotation within the case A by the friction of the shaft within it, said sleeve has a groove *m* cut in its surface (shown in Fig. 1) and a like groove *m'* cut in the contiguous surface of the case A, and a pin *o* is inserted in said groove, bearing partly in said groove in the case and partly in the groove in the sleeve, thereby interlocking the sleeve C and case A.

The sleeve C and its cap C' have their inner surfaces babbitted, as usual, said babbitted portion being indicated by *f* in the drawings.

The within-described construction thoroughly protects the bearing-surfaces of the

shaft and bearing against the introduction of
grit or any other injurious material when
said bearings are used in places where such
materials are held in suspension in the air or
5 are carried about by the motion of machines
or rapidly-moving belts and pulleys, a great
advantage being the possibility of removing
the oil within the reservoir B and replacing
it with fresh oil without removing the cap C',
10 and any wear between the cap C' and the sur-
face of the shaft on which it bears may be
taken up by the screws b without removing
the cap A² of the case A.

Having thus described my invention, what
15 I claim, and desire to secure by Letters Pat-
ent, is—

A journal-bearing consisting of an outer
case, a sleeve inclosed in said case, which
sleeve has a removable cap, one or more set-
screws in the outer case the inner ends of 20
which have a bearing on said removable cap
for adjusting the same, and a metallic mem-
ber within said outer case passing under said
inner cap and bearing on the upper surface
of the shaft within said sleeve and rotating 25
therewith for conveying oil to said shaft from
a reservoir beneath it, substantially as de-
scribed.

PETER J. WESTPHAL.

Witnesses:

H. A. CHAPIN,
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