(No Model.)

J. B. CORNWALL.

ADJUSTABLE JOURNAL BEARING.

No. 457,302. Patented Aug. 4, 1891.

Fig. 1

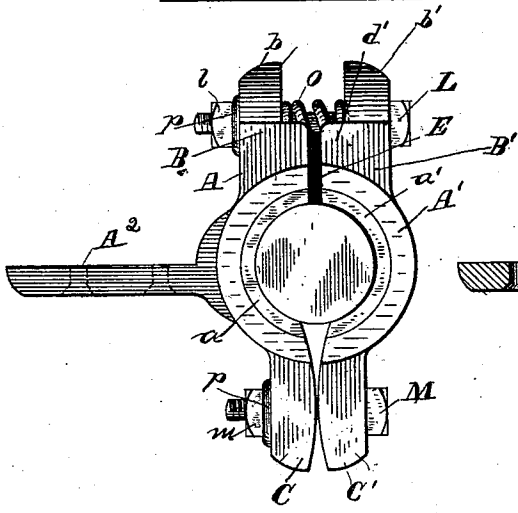


Fig. 2

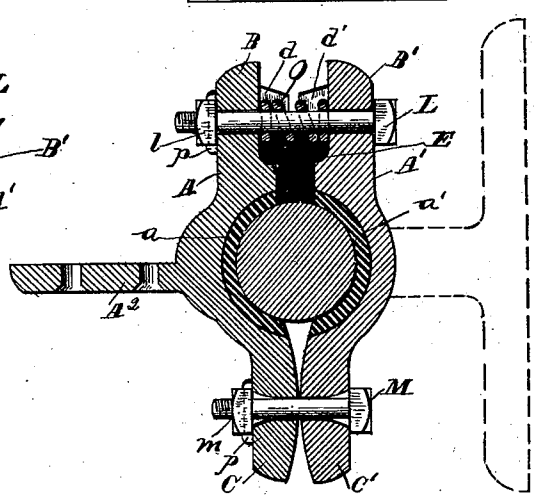


Fig. 3

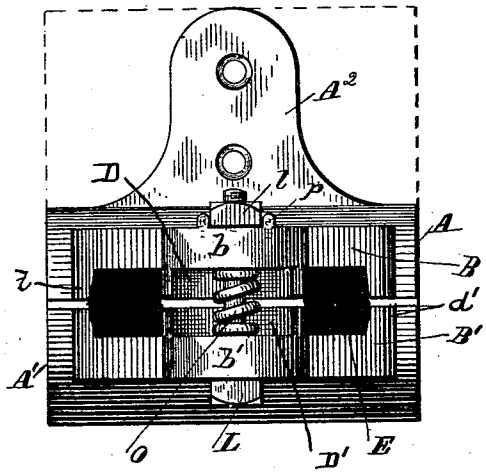
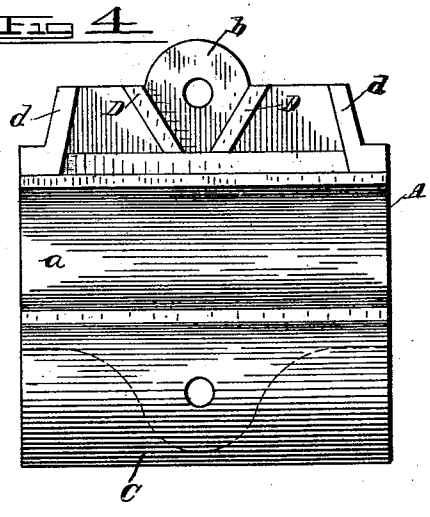


Fig. 4



WITNESSES

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ADJUSTABLE JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 457,302, dated August 4, 1891.

Application filed April 29, 1891. Serial No. 390,924. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CORNWALL, of Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Adjustable Journal-Bearings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is an end view of my improved journal box or bearing adapted for use as an eccentric strap or connection between a pitman and wrist-pin. Fig. 2 is a transverse sectional view thereof, indicating by the aid of dotted lines a supporting bracket or base by which the device may be adapted for use as a fixed journal box or bearing for a shaft. Fig. 3 is a side view thereof. Fig. 4 is an inner face view of one of the halves.

This invention is an improvement in compensating or adjustable journal-boxes for shafting or eccentric-shafts for use on eccentrics or wrist-pins, &c.; and its object is to provide an adjustable two-part device wherein wear of the parts can be readily compensated for without either dismounting the device or stopping the machine, and when used as an eccentric-strap it can be adjusted while in motion to impart a smooth movement and compensate wear without jarring or pounding.

A further object of the invention is to so construct and connect the parts of the box that they can be adjusted to compensate wear or to either tighten or loosen it by simply adjusting the bolt at one side; to provide a locking-spring on said bolt between the parts of the box, so as to dispense with jam-nuts, and to make the box self cleaning and lubricating.

To the above ends the invention consists in the novel construction and combination of parts, as will be hereinafter clearly described and claimed.

Referring to the drawings by letter, A represents one half of the box, which is about semi-cylindrical, and has an interior lining of Babbitt metal or brass *a*, as indicated. From the lower edge of the part A projects a perforated ear C, and from the opposite side a lateral extension B, having a central perforated ear *b*, and at each side of the perforation in the ear on the inner face of the extension project flanges D D. At the ends of the extension rise flanges *d*, the upper edges of which are in the same plane as the inner edges of part A.

A′ designates the other part or half of the box, having a brassing *a*′, a perforated ear C′, and an extension B′, having a central perforated ear *b*′, adjoining flanges D′ and flanges *d*′, similar to part A, so that when part A′ is fitted over part A the extensions and ears thereof are opposed. The spaces between flanges D and *d* and D′ *d*′ form chambers, in which a suitable packing E of fibrous material may be placed, which will retain a lubricating-oil and which will supply the same to the shaft through the space left between the halves, as indicated.

The parts are united by bolts L and M passing through the opposite ears *b b*′, C and C′, and having retaining-nuts *l m* on their ends. The inner opposed faces of ears C C′ are convexed, as shown, so that the parts, even if bound tightly together by bolt M, can yet be rocked slightly upon each other by tightening or loosening bolt L, so as to lessen friction or tighten the box to take up wear by the simple adjustment of bolt M without altering the adjustment of bolt M. The bolt M, in connection with the convexed lugs, forms a kind of loose hinge. The inner ends of the perforations in ears C C′, through which bolt M passes, may be slightly enlarged to allow this adjustment of the parts without strain on the bolt. A spring O is interposed between ears *b b*′, the bolt L passing therethrough, and this spring tends to force the halves apart and bind the bolt, dispensing with any necessity for a jam-nut thereon, and it also keeps the box stiff at all times, and yet permits the part to be adjusted, as described, by tightening or loosening bolt L, so as to compensate for wear on the shaft or brasses without stopping the rotation of the shaft—that is, the spring forcing the halves apart keeps the bolt tight at all times, yet does not

prevent the nut being screwed up or down, so as to draw the halves together or let them apart. The extension B and ear C may be provided with lugs *p p* to prevent the nuts turning.

In the drawings but one bolt is shown at each side and but one spring; but obviously these parts may be duplicated, according to the size and stiffness of the box. Part A has a projecting perforated shank A^2 for attachment to a strap or pitman or to any other support, or it may be provided with a bracket or base, as indicated in dotted lines, for mounting it where desired to carry a shaft. By thus constructing the box or strap it can be adjusted by the use of one bolt at one side and can be left in the exact position it is set without the use of a jam-nut, the spring O, which tends always to throw the halves open or apart at all times, binding the nut as effectively as a jam-nut would and obviating any liability to displace the adjustment which is incident to the use of jam-nuts, which in tightening generally alter the position of the adjusting-nut somewhat. In this box also is provided a chamber to receive packing, which will continually wipe the shaft and at the same time supply lubricant thereto.

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

1. In a journal-box, the combination of the opposite semi-cylindrical halves having projecting ears at each side, the opposed ears at one side of the box being convexed on their inner faces, with the bolts passing through said ears, and a spring slipped on the bolt between the ears at the other side, substantially as described.

2. The combination, in a journal-box, of two opposite nearly semi-cylindrical halves having opposite offstanding perforated ears, one pair of said ears being convexed on their opposed faces, the bolts passing through said perforated ears, the nuts on said bolts, and a spring interposed between the ears at the side of the box opposite the convexed ears and tending to throw the halves apart, substantially as specified.

3. The combination, in a journal-box, of one semi-cylindrical half having offstanding perforated ears at one side, an opposite semi-cylindrical half also having offstanding perforated ears at each side, bolts passing through said ears and confined by nuts, one pair of said ears being convexed on their opposed faces, and a coiled spring slipped on a bolt at one side of the box between the other pair of ears, substantially as described.

4. The combination of the opposed halves having laterally-projecting ears at one side and laterally-projecting flanges at the opposite side, said flanges having a central perforation and a depression, recess, or chamber at each side of said perforation, the packing placed in said recesses, and the non-adjusting bolts and nuts uniting the halves at one side and the adjusting bolt, nut, and spring inserted between the halves at the opposite side and adapted to force the halves apart, substantially as set forth.

5. The combination of the opposite halves having perforated ears at one side, rounded on their inner opposed faces, and perforated and flanged extensions at the opposite side, the bolts uniting the same, and the spring interposed between the extensions, substantially as set forth.

6. The combination of the opposite halves formed with ears at one side, rounded on their inner opposed faces, lateral extensions at the opposite side having perforated ears, upstanding flanges at each side of the perforation, and end flanges and bolts uniting said halves, substantially as and for the purpose specified.

7. The combination of the opposite halves formed with perforated ears at one side, lateral extensions at the opposite side having perforated ears, flanges at each side of the perforation and at the ends of the extensions on the inner faces thereof, and the uniting-bolts passing through said perforated ears, the packing, and the springs interposed between the extensions, substantially as set forth.

8. A journal-box formed of two similar parts provided with ears, the lower ears being slightly rounded on their inner surface, while the upper ears are separated so as to create a chamber between them when the box is in position on the journal, a spring nut-lock inserted between these lugs, and a bolt passing through the lugs and through the spring, by which the two halves of the box are held in place and readily adjusted, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN B. CORNWALL.

Witnesses:
J. S. LEAS,
C. V. GOULD.