(No Model.)

D. I. LYBE.

JOURNAL BEARING.

No. 524,065. Patented Aug. 7, 1894.

FIG. 1.

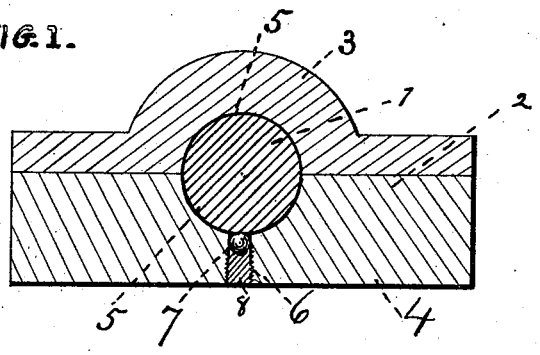


FIG. 2.

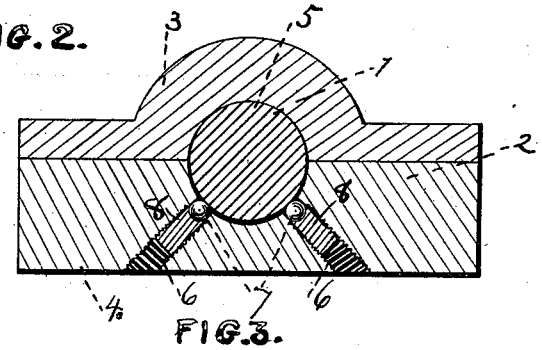


FIG. 3.

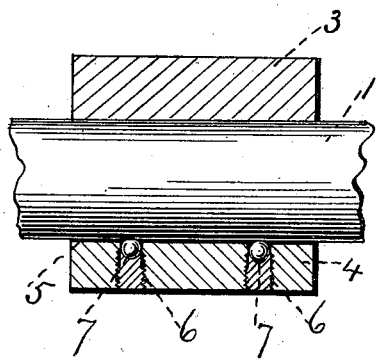


FIG. 4.

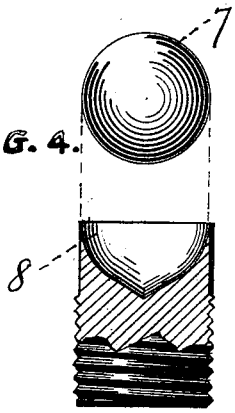
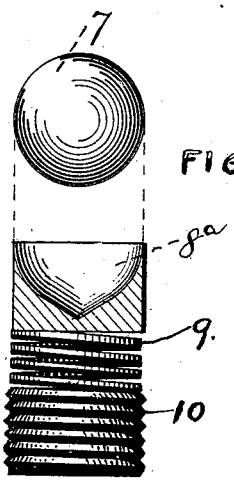


FIG. 5.



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UNITED STATES PATENT OFFICE.

DANIEL I. LYBE, OF SIDNEY, IOWA.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 524,065, dated August 7, 1894.

Application filed June 1, 1894. Serial No. 513,125. (No model.)

To all whom it may concern:

Be it known that I, DANIEL I. LYBE, a citizen of the United States, residing at Sidney, in the county of Fremont and State of Iowa, have invented a certain new and useful Improvement in Journal-Bearings for Shafts, &c., of which the following is a full, clear, and exact specification.

My invention relates to improvements in journal bearings for shafts, &c., and has especial reference to that class of such devices in which a ball, or series of balls is located in the journal box in such position as will allow the shaft, &c., to rest and rotate thereon with a minimum amount of friction.

The object of my invention is to provide a device of this character, which will be simple in operation, durable in construction, and which is capable of having the ball or balls easily removed from the bearing when they have become worn so as not to be of any further use, and a new ball or series of balls introduced.

To these ends, my invention consists in the improved construction and combination of parts, as more fully described and pointed out in the claims.

In the drawings:—Figure 1— is a sectional view of the journal bearing, showing my device in position. Fig. 2— is a similar view, showing the device applied in a different manner. Fig. 3 is a sectional view taken at right angles to that shown in Fig. 1. Fig. 4— is a sectional view of the device; and Fig. 5— is a sectional view of a modification.

Similar numerals of reference indicate similar parts in all of the figures of the drawings.

Referring to the drawings, 1 designates a shaft, adapted to rest in the journal box 2. The box 2 is divided into the upper and lower portions 3 and 4 respectively.

5 designates the opening for the shaft 1, said opening being of slightly larger diameter than that of the diameter of the shaft, in order that the shaft may turn easily therein.

6 designates a screw threaded opening, which may be placed either in the center of the lower portion 4 and which extends vertically upward, as shown in Figs. 1 and 3, or which may extend upwardly from the bottom of the lower portion 4, at an angle, in which case two of the devices should be used, each to extend upwardly at opposite angles. These openings are to be of sufficient size to admit of the entrance of a ball 7, made of steel, or other suitable material, and after the said ball has been introduced into the opening 6, a screw cap 8 having at its upper end a semi-cylindrical pocket for the ball 7, is screwed into the said opening, by means of a screw driver, or wrench, in the former case, the cap to have at its lower end a kerf for the reception of the end of the screw driver, or in the latter case, the end of the screw cap should have a squared form for the reception of the wrench.

With this construction, it will be obvious that after the shaft has been put in place, the screw cap and ball can be screwed into the opening in the journal box a sufficient distance to raise the shaft from its position of resting on the bottom of the opening 5, and thereby leaving the shaft to rest on the ball 7, upon which the shaft will turn. If the shaft is a heavy one, the device should be used as indicated in Fig. 2, thereby allowing the weight of the shaft to be more evenly distributed. Should the bearing of the shaft be a long one it may be necessary to use two or more devices as shown in Fig. 3.

It is obvious, that should the ball become worn, and the shaft thereby become slightly loose in the bearing, by screwing the cap 8 a slight distance into the opening, the wear will be taken up, and the shaft again be in proper position. After a ball has become worn until it becomes of no use, by unscrewing the screw plug and taking out the ball, a new one may be inserted with ease and the shaft made tight.

In Fig. 5 is shown a modification, in which the screw cap 8 is divided into two parts, the upper part 8^a carrying the pocket for the ball, and the lower the screw threaded plug 10. Between the two is inserted a coiled spring 9 of sufficient strength to hold the ball in position against the shaft.

Having thus described my invention, what I claim as new is—

1. A journal bearing, comprising an upper

and a lower member, the latter being provided with recesses for retaining balls therein for the shaft to rest upon; and balls yieldingly supported in said recesses, substantially as described.

2. A journal bearing comprising an upper and a lower member, the latter being provided with recesses for retaining balls therein for the shaft to rest upon; balls in said recesses; screw-caps for holding said balls; springs bearing against the caps; and screw-plugs supporting the springs, substantially as set forth.

In testimony whereof I have hereunto set my hand this 28th day of May, 1894.

DANIEL I. LYBE.

Witnesses:
G. T. HATTEN,
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