J. Stimpson,

Journal and Box.

No. 36,487. Patented Sep. 16, 1862.

Fig. 3.

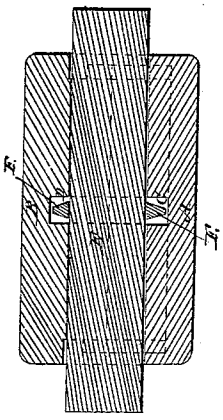


Fig. 6

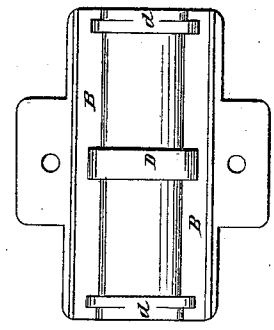


Fig. 2.

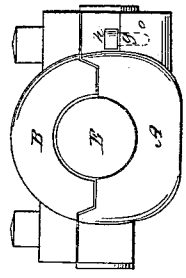


Fig. 7.

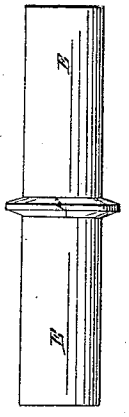


Fig. 5.

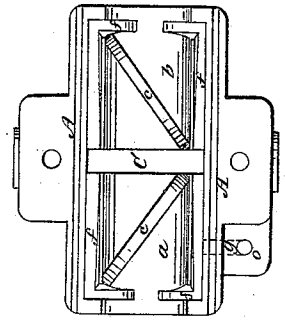


Fig. 1.

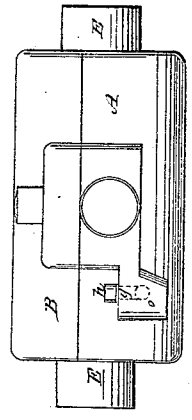
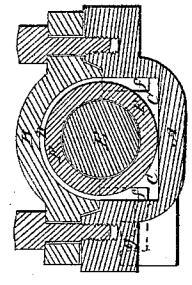


Fig. 4.



Witnesses.

Edwin Lewis

W. L. Cook.

Inventor.

James Stimpson.

UNITED STATES PATENT OFFICE.

JAMES STIMPSON, OF BALDWINSVILLE, MASSACHUSETTS.

JOURNAL AND JOURNAL-BOX.

Specification of Letters Patent No. 36,487, dated September 16, 1862.

To all whom it may concern:

Be it known that I, JAMES STIMPSON, of Baldwinsville, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Journals and Journal-Boxes for Heavy Shafting, &c.; and I do hereby declare the same to be fully described in the following specification and illustrated in the accompanying drawings, of which—

Figure 1, is a side elevation; Fig. 2, an end view; Fig. 3, a longitudinal section; Fig. 4, a transverse section of a journal and box, having my improvement applied thereto; Fig. 5, is a top view of the lower half of the box; Fig. 6 is an under side view of the cap; Fig. 7, is an elevation of the journal and its collar.

In the drawings A, describes the lower half of the box, while B, is the cap portion thereof. The said lower part is constructed with a lubricating chamber C, which is formed transversely of the said box and divides into two parts *a*, *b*, as shown in Fig. 5. Directly over the said chamber C, and in the cap B, another semicircular opening D, is made, the same having a corresponding width and depth to that of the oil chamber C. Furthermore at each side of the lower portion A, of the box there is a vertical chamber *f* which communicates with the oil receptacle or lubricator chamber the said vertical chambers being formed slightly tapering from their outer ends toward their middles in order that the oil which may flow from the journal into such chambers may be conveyed back into the oil chamber C.

E, denotes the journal the same having a collar or annulus F, applied to it as seen in Fig. 7. This collar is so disposed on the journal as to freely revolve through the oil chamber when such journal is put in revolution and besides is formed tapering from its inner surface to its periphery in order that the lubricating material raised by the said collar may flow from each side of the same on the journal and thereby lubricate the same. Furthermore in order that the oil flowing back upon the journal box may be retained therein so as to further lubricate the journal I form a diagonal groove *c*, from each lower half *a*, *b*, of the journal box in manner as shown in Fig. 5. The surplus oil in the said box instead of running out at it sends will of course flow into the said groove and as the journal revolves will be carried through the entire length of the box thus serving to lubricate the journal through its entire length. Furthermore the cap B, is scored or channeled at each lower corner of its two ends the same being for the purpose of intercepting the oil or lubricating material that may flow over the outer end *d*, of the bearing surface of the cap. This groove also serves to direct the oil or lubricating fluid back into the side chambers *f*, from whence it will flow into the oil chamber or lubricator C.

For the purpose of readily supplying the oil chamber with a lubricating material, and at the same time to ascertain the amount of oil in the said chamber I form an auxiliary chamber *o* in a projection extending from one side of the said box as shown in Fig. 1, the lower surface of which is in the same plane with the side chambers *f*, and opens into one of such chambers. In the top of this auxiliary chamber is an opening *g*, into which the oil is to be poured, the said orifice after a sufficient quantity of oil or other lubricating material has been supplied to the chambers, being stopped with a plug *h*. In order to keep the journal properly lubricated the auxiliary filling chamber should contain a small quantity of oil on its bottom; when none is found therein it should be replenished.

From the above it will be seen that as the journal revolves within the box the oil will be elevated by means of the collar and will flow down both sides thereof toward the outer ends of the journal. Also that the oil flowing back into the box will be further retained by means of the diagonal groove, and again carried forward, serve to lubricate the journal along its entire length. Thus by means of my invention a continual circulation from the lubricator chamber to the journal and from the latter to the former is maintained while the journal is in rotation.

I claim—

1. The above described application of an oil or lubricator chamber C, and an annulus or collar F, (or its equivalent) to a journal and its box bearing surfaces the same being arranged substantially in manner and so as to operate as set forth.

2. I also claim when the journal and its

box or bearing surfaces are so made, forming a groove *c* to extend diagonally across each of the bearing surfaces substantially in manner as described and represented, and for the purpose set forth.

3. I also claim the above described arrangement of the auxiliary or filling chamber *o* with respect to the main and side chambers *f*, *c* the same being productive of advantages as above set forth.

JAMES STIMPSON.

Witnesses:
EDWIN SEWGER,
W. L. COOK.