H. H. Thayer.
Journal Box.

3 Sheets.
Sheet. 1.

No. 21,474. Patented Sept. 7. 1858.

Fig 1.

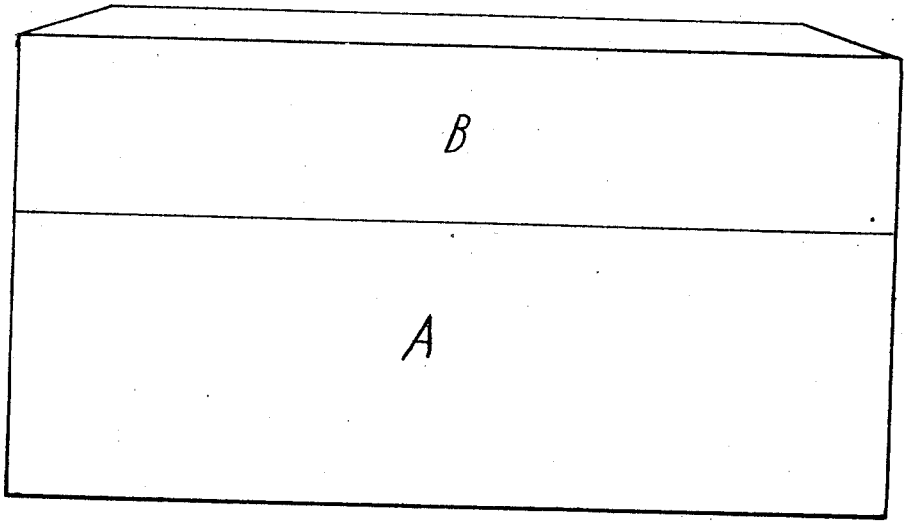
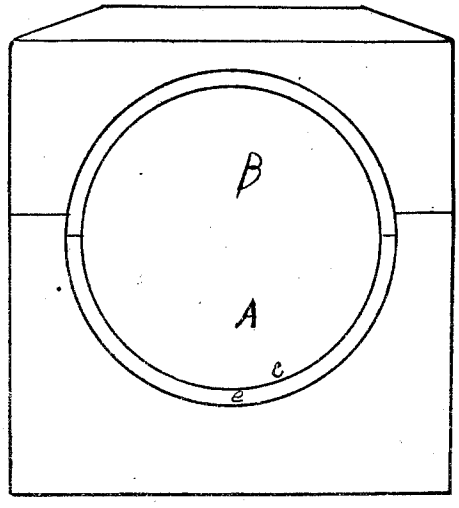


Fig: 2



3 Sheets-
Sheet. 2.

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Journal Box.

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Fig. 3.

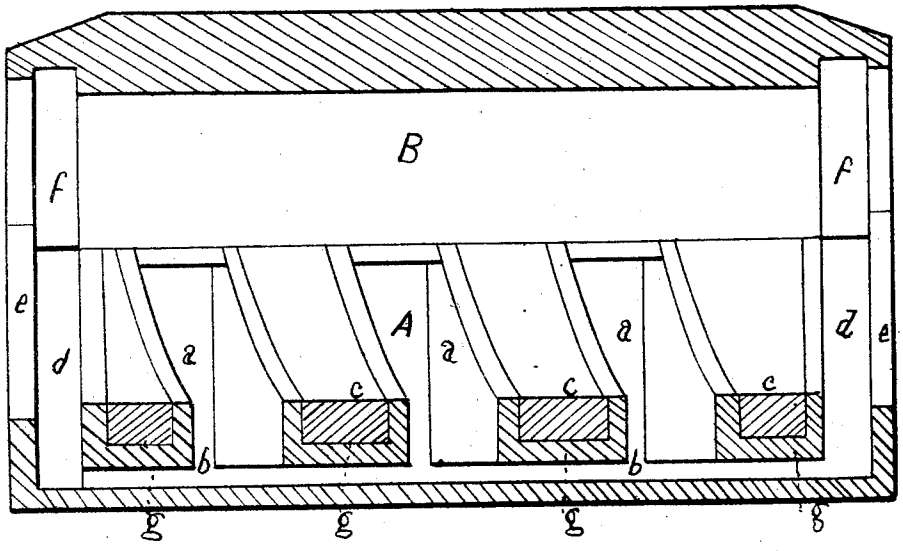
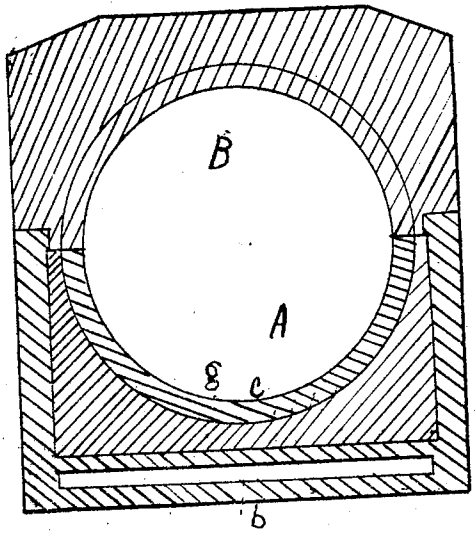


Fig. 4



3 Sheets.
Sheet. 3.

H. H. Thayer.

Journal Box.

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Fig. 5.

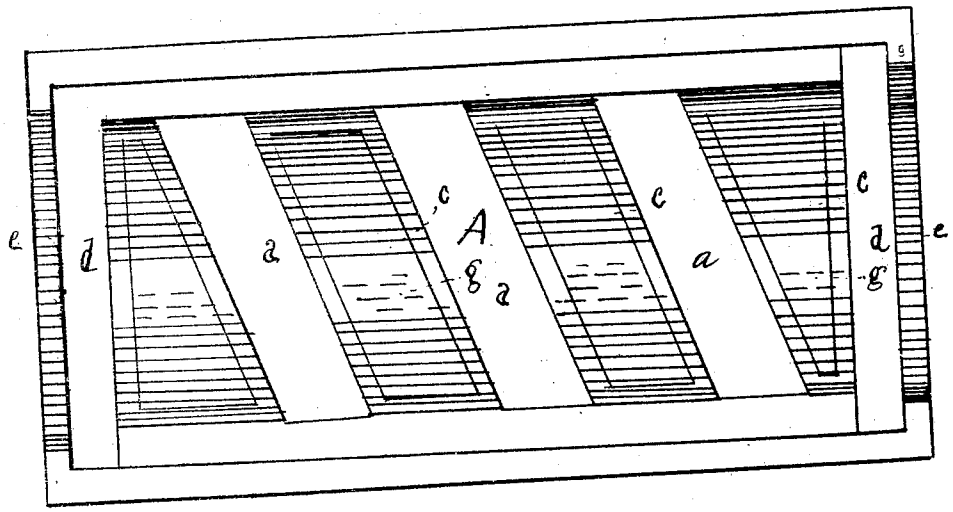
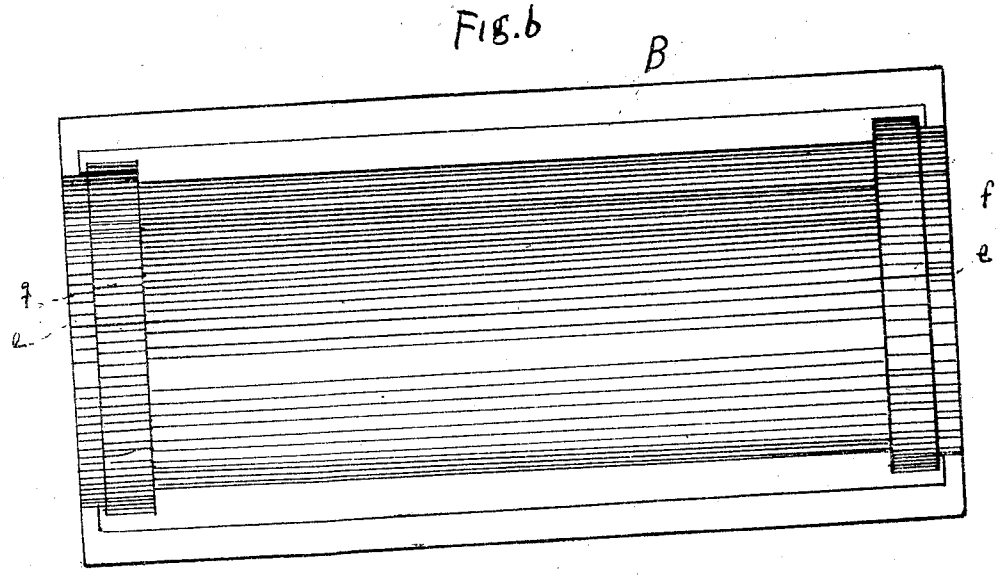


Fig. 6



UNITED STATES PATENT OFFICE.

H. H. THAYER, OF SANDWICH, MASSACHUSETTS, ASSIGNOR TO JAMES A. WOODBURY, OF WINCHESTER, MASSACHUSETTS, AND S. A. WOODS, OF BOSTON, MASSACHUSETTS.

JOURNAL-BOX.

Specification forming part of Letters Patent No. 21,474, dated September 7, 1858; Reissued March 11, 1873, No. 5,323.

To all whom it may concern:

Be it known that I, HARLOW H. THAYER, of Sandwich, in the county of Barnstable and State of Massachusetts, have invented an Improved Box for Supporting the Journal of a Rotary Shaft; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which,—

Figure 1 is a side elevation; Fig. 2, an end view; Fig. 3, a longitudinal section, and Fig. 4, a transverse section of the said box. Fig. 5 is a top view of the lower half or journal bearing part. Fig. 6 is an under-side view of the cap.

In such drawings, A, denotes the lower portion of the box, while B, is the cap thereof. The said lower portion is constructed with a series of lubricating chambers, *a*, *a*, *a*, each of which extends upward from one common oil trough *b*, arranged in the lower part of the box, as shown in the drawings. Each of the chambers *a* is also arranged at an acute angle with the axis of the journal or that of the bearing surfaces *c*, *c*, *c*, of the journal box, or at an acute angle with either side of the box in manner as shown in Fig. 5. The several chambers *a*, *a*, *a*, are to contain lubricators or cotton wicking, sponge or other suitable material capable of absorbing oil, the same being in order that such material when saturated with oil may lubricate the journal when it may be running within the box, the chambers, *a*, *a*, being so arranged as to cause nearly all if not the entire surface of the journal to be lubricated during each revolution of the journal. Furthermore, at each end of the lower portion A, of the box there is a vertical chamber *d*, which communicates freely with the oil trough *b*, and has a circular opening, *e*, formed in it and the cap of the box, such opening being made in diameter somewhat greater than the journal in order that there may be a space between the two such as will prevent oil from the journal from being removed from the periphery of the opening and running from the same down upon the outer surface of the end of the part A.

Immediately over each of the chambers *d*, and in rear of the opening *e*, the cap B is grooved as shown at, *f*, such groove being extended entirely across the cap, and for the purpose of intercepting the oil or lubricating fluid that may pass beyond the end of the outer bearing surface *g*, of the cap. This groove also serves to transmit such oil into the chamber, *d*. If desirable, each of the bearing surfaces, *g*, *g*, of the lower portion A, of the box may be chambered or recessed and "babbited" or filled with an anti-friction composition or material.

In the operation of the above described box it will be obvious that as the journal revolves within it the surface of such journal will be lubricated by the sponge or wicking or lubricator of the chambers *a*, *a*, *a*, also that the amount of surface so lubricated will depend very much on the width of each chamber and its angular position with reference to the side of the box or to the axis of the journal. The less the angle of inclination of the chamber to the side of the box the greater will be the amount of surface of the journal lubricated by the oily material within the chamber. Such oil as may pass beyond the bearing surfaces in a longitudinal direction will be received into one of the intercepting chambers *d*, and from thence will pass into the trough *b*, from whence it will be again absorbed by the capillary sponge or wicking in the chambers, *a*, *a*. Thus by my invention a constant circulation of the oil from the trough to the journal, and from the latter to the former will be taking place, while the journal is in rotation, nearly all if not the entire surface of the journal being thoroughly lubricated at the same time.

I claim—

1. The combination of two or any other suitable number lubricating chambers *a*, *a*, and bearing surfaces *g*, *g*, with one trough or channel arranged below them as specified.

2. I also claim the combination of the intercepting chamber *d*, at each end of the box, with the oil trough *b*, the lubricator chambers *a*, *a*, and the bearing surfaces *g*, *g*.

3. I also claim making the opening of the chamber *d*, of greater diameter than the journal in manner and for the purpose as specified.

4. And in combination with the intercepting chamber *d*, I claim the intercepting groove *f*, arranged in the cap B, in manner and for the purpose specified.

In testimony whereof I have hereunto set my signature.

HARLOW H. THAYER.

Witnesses:
R. H. EDDY,
F. P. HALE, JR.

[FIRST PRINTED 1911.]