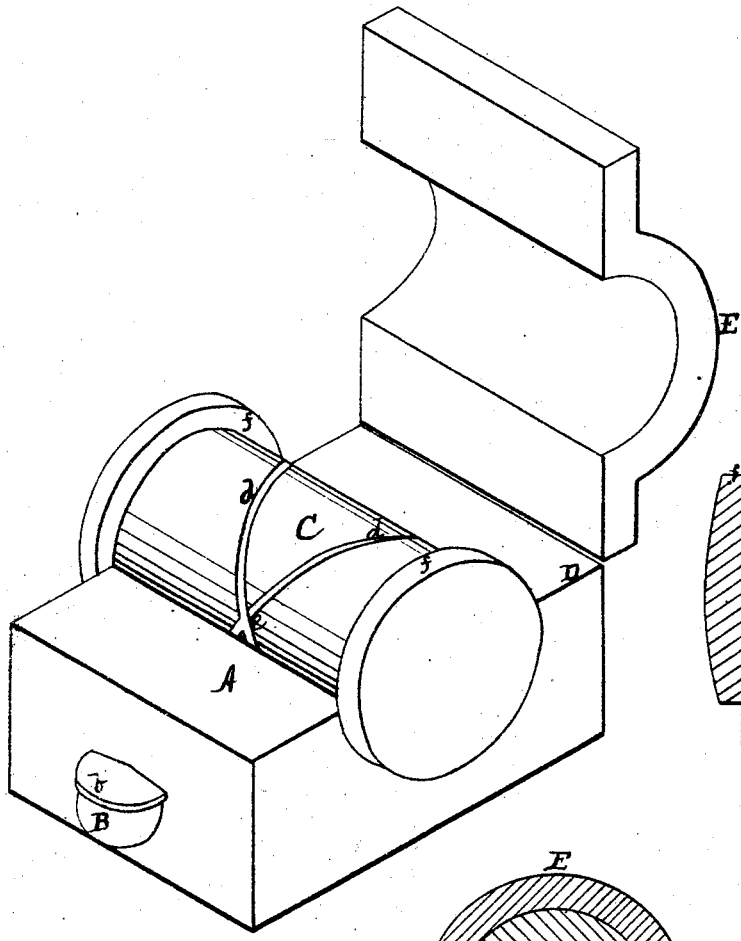
A. Wood.

Lathe-Box & Journal.

No. 72147 Patented Dec. 10, 1867.



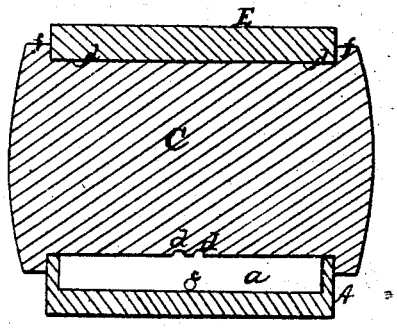


FIG. 2.

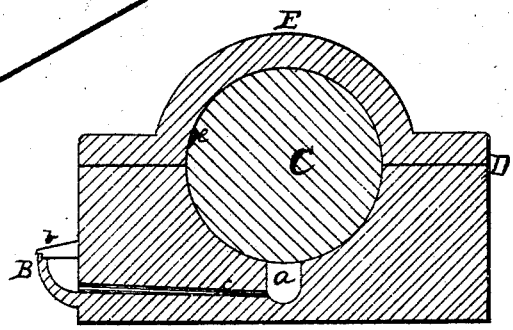


FIG. 3.

WITNESSES

Thos. H. Dodge

D. L. Miller

INVENTOR.

Aaron Wood

UNITED STATES PATENT OFFICE.

AURIN WOOD, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN LATHE BOXES AND JOURNALS.

Specification forming part of Letters Patent No. **72,147**, dated December 10, 1867.

To all whom it may concern:

Be it known that I, AURIN WOOD, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Lathe Boxes and Journals, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of my improved lathe-box and so much of the journal as is necessary to illustrate my invention, the cap of the box being shown turned back to expose the bearing of the journal. Fig. 2 represents a longitudinal central section of the box and journal when the cap is down, and Fig. 3 represents a cross-section of the same.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

The part marked A in the drawings is the bottom of the box, and in the bottom of which is a longitudinal recess or groove, *a*, and upon the front side of the part A is an oil-cup, B, having a cover, *b*. The oil-cup B and recess or groove *a* are connected by a small oil-hole, *c*. The journal or bearing C has two grooves, *d d*, cut in the surface thereof. These grooves run from the point *e*, where they join each other, to near the flanges *f f*, and then back again to the point *e*.

The operation is as follows: The recess or groove *a* being filled with some fibrous material, the cap *b* is removed, and some lubricating substance is turned into the cup B until it fills the groove *a*, passage *c*, and cup B, when cap *b* is replaced. As the lathe-journal C revolves the oil is taken up by the surface of the journal coming in contact with the fibrous material in the groove *a*, and is forced by the grooves *d d* outward and inward in such a manner that the bearing-surfaces of the journal C and box D are both kept perfectly lubricated.

If preferred, the cup B may be arranged on the end of the part A.

It will be observed that the cup B is so arranged as respects the groove *a* that when full the oil will be raised in groove *a*, so as to nearly or quite touch the journal C, so that the operator can always tell when a sufficient quantity of oil has been turned into box B.

The cap E is tight, and when that is down and the cap *b* in place, as shown in Fig. 3 of the drawings, there is no chance for dust or dirt to reach the wearing-surfaces of the journal and box.

It is important that the journal of an engine-lathe run true in order to do good work, and, as the boxes and journals have heretofore been constructed, a large number of the journals are worn untrue by the first day's use, owing to the want of proper lubrication. By my improvements all such liability of wearing of the journal is obviated, since it requires only one proper application of oil, as above described, for many days, even when the lathe is first put in use.

The operator can always tell by removing cap *b* when it is necessary to replenish the oil in cup B, since the bottom of the recess *a* is made a little lower than the bottom of the cup B, as fully shown in the drawings.

Having described my improved lathe box and journal, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination and relative arrangement of the oil-box B and groove *a* and inclined oil-passage *e*, formed in the bottom part A of the journal-box, substantially in the manner and for the purposes herein shown and specified.

2. The combination of the journal C, having the peculiarly-shaped grooves *d d* cut in its surface, with the journal-box D, provided in its lower part with the oil-box, inclined oil-passage, and groove *a*, under the arrangement substantially as herein shown and set forth.

AURIN WOOD.

Witnesses:

THOS. H. DODGE,

D. L. MILLER.