I. P. WENDELL.

Lubricating Journal Bearings.

No. 104,805. Patented June 28, 1870.

Fig. 2.

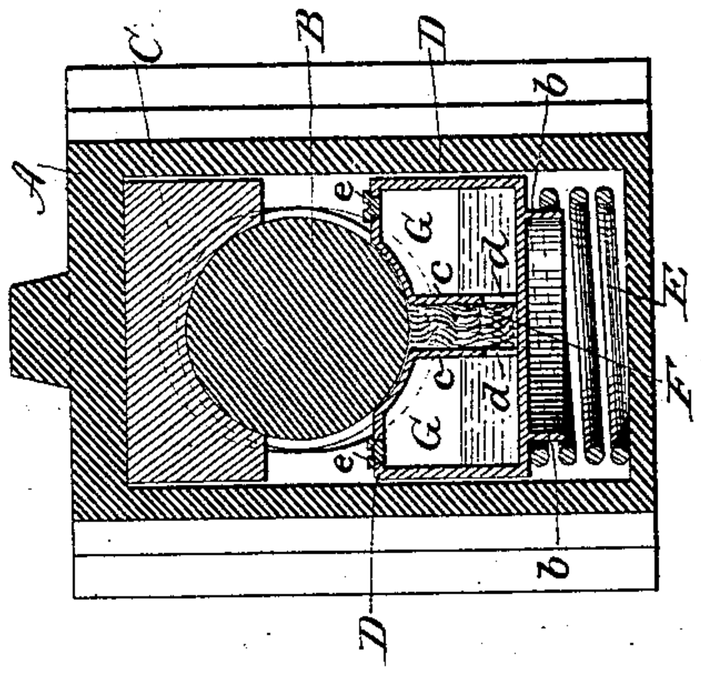
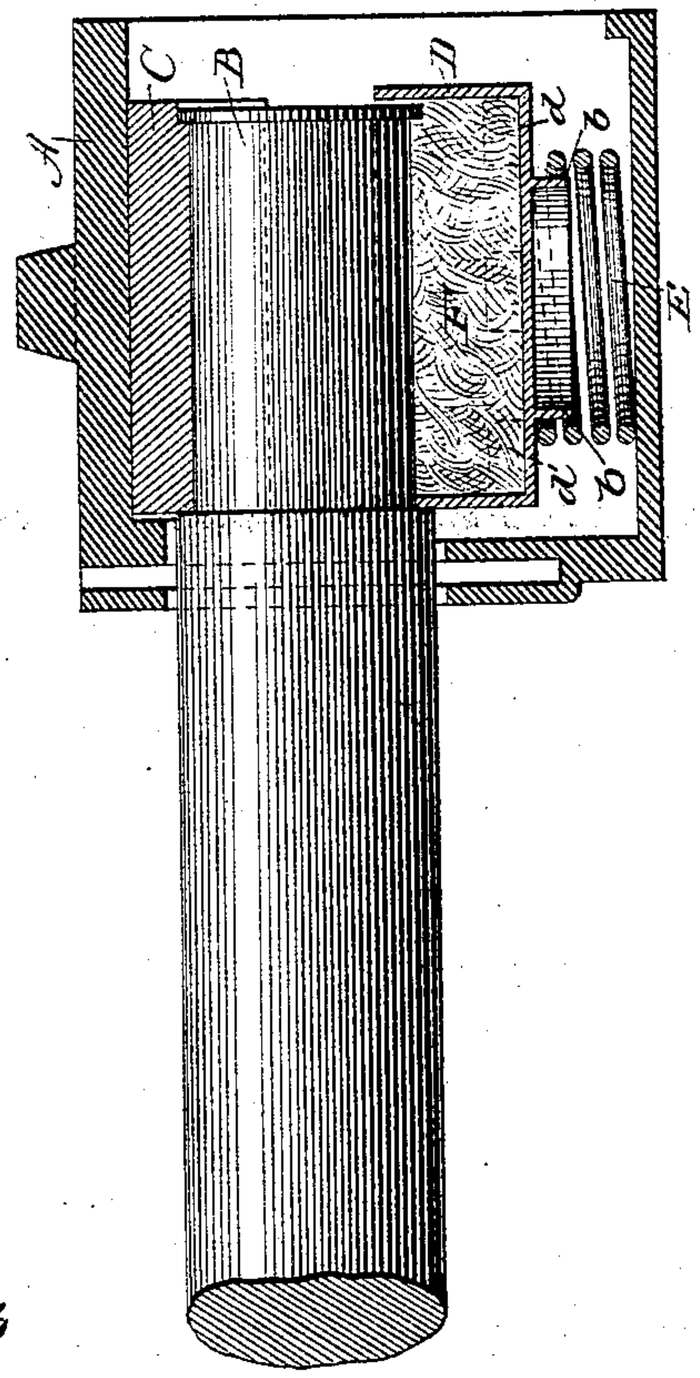


Fig. 1.



Witnesses:
Thomas J. Beasley
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By his Attorney
Stephen Ustick

United States Patent Office.

ISAAC P. WENDELL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND STEPHEN P. M. TASKER, OF SAME PLACE.

Letters Patent No. 104,805, *dated June* 28, 1870.

IMPROVEMENT IN LUBRICATING JOURNAL-BEARINGS.

The Schedule referred to in these Letters Patent and making part of the same

I, ISAAC P. WENDELL, of the city of Philadelphia, and State of Pennsylvania, have invented certain improvements in Lubricating Journal Bearings, of which the following is a specification.

The nature of my invention consists of an oil-box for lubricating the journal, which has a closed top, having a concave face for catching the oil which escapes from the journal, and which is constructed with a vertical space, for containing felt, and side oil-chambers, which have communication with said space by means of openings in vertical partitions which separate the space from the chambers, in such a manner that the oil contained in the chambers keeps the felt in said space well saturated with oil, which is constantly supplied to the journal by capillary attraction, the upper edges of the felt protruding through a slot in the top of the box.

The oil being inclosed, and perfectly free from dust, removes the difficulty experienced in feeding through porous material in an open box.

To enable others skilled in the art to which my improvement appertains to make and use my invention, I will now give a detailed description thereof.

In the accompanying drawing, which makes a part of this specification—

Figure 1 is an ordinary car-box, with the improved lubricating device in connection.

Figure 2 is a cross-section of the same.

Like letters in both figures indicate the same parts.

A is an ordinary car-box.

B is the journal of the shaft in connection therewith; and

C, a brass bearing, all constructed in the ordinary manner.

The lubricating device which constitutes the invention is constructed as follows:

D is an oil-box, whose upper concave surface, *a*, nearly touches the journal.

The box is held up in position by means of the spring E, which rests upon the upper surface of the bottom of the box A, and it is held in its lateral position by means of the annular rim *b*, on the under side of the oil-box D, as seen in the drawing.

The said oil-box D has vertical partitions *c c*, between which I place pieces of felt F, which fill up the space between the partitions. The felt is continually saturated with oil, which is contained in the reservoirs or chambers G G, there being openings *d* in the partitions *c c*, through which the oil passes to the felt, and which is constantly supplied to the journal B by capillary attraction.

The upper edges of the felt project a little above the concave face *a* of the box D, to prevent the latter touching the journal B, and to allow the felt to be kept up, so as to gently touch the journal, by the action of the spring E, for the lubrication of the same.

The concave surface *a* of the top of the box serves to catch the oil which would otherwise escape from the journal as its periphery passes over the felt. The escaping oil thus preserved as it inclines to the felt is again taken up and redistributed to the journal.

There are suitable openings in the top of the oil-box D for the purpose of supplying the chambers G G with oil. These openings are closed by means of screw-plugs *e e*, or otherwise, so as to prevent any dirt passing into the oil.

It will readily appear that the lubrication of the journal as it revolves must be kept up in a complete and perfect manner, in consequence of its contact with a large body of felt, which is constantly saturated with oil from the reservoir, as long as any remains in them.

If, under some circumstances, it may be seen that the oil is fed to the journal too freely, the difficulty may be obviated by diminishing the thickness of the felt F, thereby causing a slower motion to the passage of oil.

I do not confine myself to the use of felt between the partitions *c c*, as I contemplate using leather or other fibrous or porous material in its place.

What I claim as my invention, and desire to secure by Letters Patent, is—

The oil-box D, having side oil-chambers G G and perforated vertical partitions *c c*, between which felt or other fibrous or porous material F is held, the said box having a concave surface, *a*, and being held up by means of a spring, E, all in the manner and for the purpose set forth.

In testimony that the above is my invention, I have hereunto set my hand and affixed my seal, this 7th day of April, 1870.

ISAAC P. WENDELL. [L. S.]

Witnesses:

STEPHEN USTICK,

THOMAS S. BEWLEY.