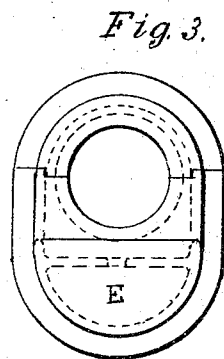
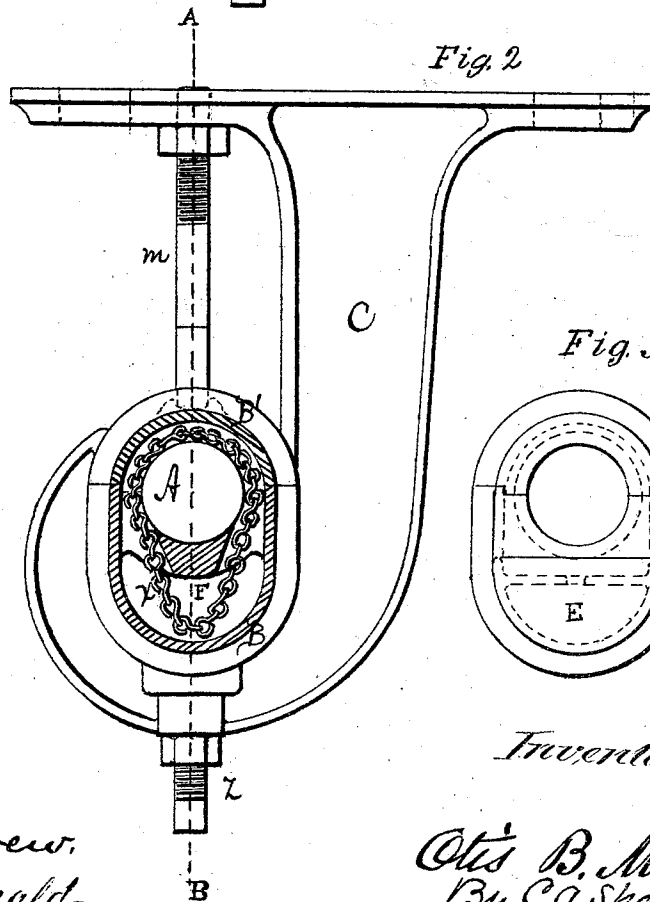
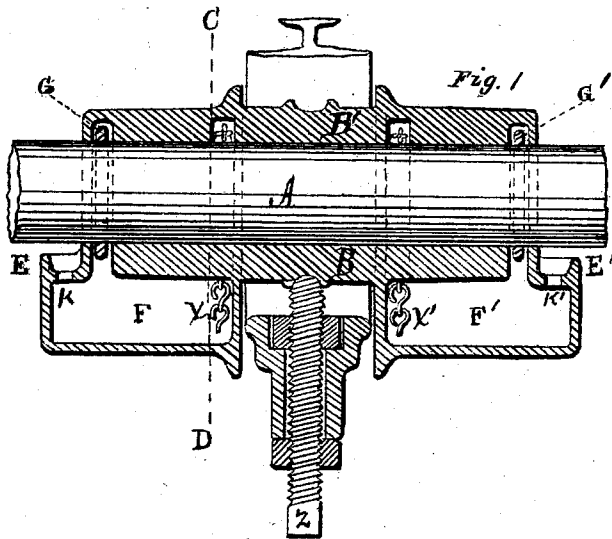


O. B. MORSE.
Journals and Bearings.

No. 147,678.

Patented Feb. 17, 1874.



Witnesses
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att'y.

UNITED STATES PATENT OFFICE.

OTIS B. MORSE, OF SOMERSWORTH, NEW HAMPSHIRE.

IMPROVEMENT IN JOURNALS AND BEARINGS.

Specification forming part of Letters Patent No. 147,678, dated February 17, 1874; application filed December 13, 1873.

To all whom it may concern:

Be it known that I, OTIS B. MORSE, of Somersworth, in the county of Strafford, State of New Hampshire, have invented a certain new and useful Improvement in Self-Lubricating Boxes, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved self-lubricating box, taken on the line A B, Fig. 2. Fig. 2 is a cross-section of the same, taken on the line C D, Fig. 1. Fig. 3 is an end view of the cup and box.

Like letters refer to like parts in the different figures of the drawings.

My invention relates to that class of shafting-boxes known as "self-oiling;" and consists in a novel construction and arrangement of the parts, all as hereinafter more fully set forth, the object being to supply a more effective and economical box than has heretofore been produced.

In Fig. 1, A is the shaft; B, the box; B', the cover or cap of the box; F F', the oil-reservoirs; G G', the collars or guard-rings; E E', the drip-cups; and K K', apertures leading from the drip-cups to the oil-reservoirs; and X X', chains passing around the shaft A to the bottom of the reservoirs F F', and operating to raise or convey the oil to said shaft.

In Fig. 2, C is the hanger; A is the shaft; a, the chain; F, the reservoir; B, the box; B', the cap; m, the cap-screw; and z, the screw for leveling or truing the shaft.

From the above description, the nature and operation of my invention will be readily understood by all conversant with such matters.

The reservoirs F F', being supplied with oil as the shaft A rotates, the chains will be caused to traverse and take up the oil by adhesion or friction, and lubricate the shaft automatically.

I am aware that one Hamilton obtained Letters Patent of the United States dated October 2, 1866, numbered 58,409, for an improvement in self-lubricating boxes, in which a chain is used, in combination with a cup having two compartments, one compartment

of which is designed for oil and the other for water.

I use the guards G G', arranged on the shaft, as shown. These guards or rings are fitted closely to the shaft, and work in recesses cut in the upper and lower half of the box, the lower recesses or slots extending vertically through the box into the reservoirs F F'. The slots or recesses, in which said rings work, are also large enough to prevent the rings from coming into contact with the box as the shaft revolves. The oil taken up by the chains will be conducted along the shaft, or work its way through the box in the process of lubricating the same, until it reaches the guards G G', where any surplus not required for lubricating purposes will fall into the reservoirs F F', through the apertures in which the lower half of the rings work. Any oil not so returned to the reservoirs, and which may find its way outside of the rings and drop from the shaft, will be caught by the cups E E' and returned to the reservoirs through the apertures K K'.

It will be seen that in my invention, the oil tanks or reservoirs, being at the sides of the hanger, are brought nearer the shaft, so that comparatively short chains can be used, (an important feature,) for when said reservoirs are so located as to necessitate the use of long chains, the process of lubricating the shaft will be imperfect on account of the small quantity of oil they will raise, especially when the shaft is running at a low rate of speed. It will also be seen that a box provided with the reservoirs, as shown, will keep the oil free from all dirt and impurities, and in cotton and woolen mills will protect it from the fine fibers of cotton and wool, which, where the ordinary boxes are used, causes a great waste of the oil.

I do not confine myself to the use of two chains and two reservoirs, as shown, as where small boxes are required, I sometimes construct them with one chain and one reservoir arranged in the center, and place guards on the shaft each side of the chain, also providing the reservoir with a drip-cup at each end of the box. I am also aware that in Fig. 15, Plate 13, of Hensinger von Waldegg Schmiervorrichtungen, a self-lubricating device is shown, in which there is a box containing a reservoir for the oil, and a chain working in connection with

said box, and the shaft to carry up or elevate the oil, but said device is essentially different from mine.

I therefore do not claim anything shown or described in said patent of 1866, or anything shown in said Fig. 15, when in and of itself considered; but

What I do claim is—

1. The combination of the cups E E', reservoir F, chain α , apertures K K', guards G G',

and shaft A, substantially as and for the purpose described.

2. The oil-reservoir F, provided not only with an aperture for the chain, but also with an aperture for the ring G, substantially in the manner and for the purpose specified.

OTIS B. MORSE.

Witnesses:

C. A. SHAW,

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