

D. A. DEMING & S. W. WICKES.

Journal-Boxes.

No. 158,575.

Patented Jan. 12, 1875.

Fig. 1.

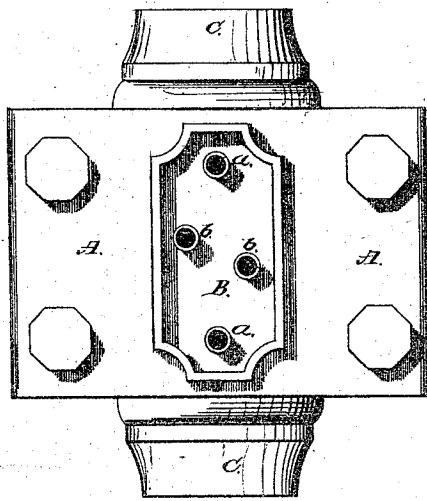


Fig. 3.

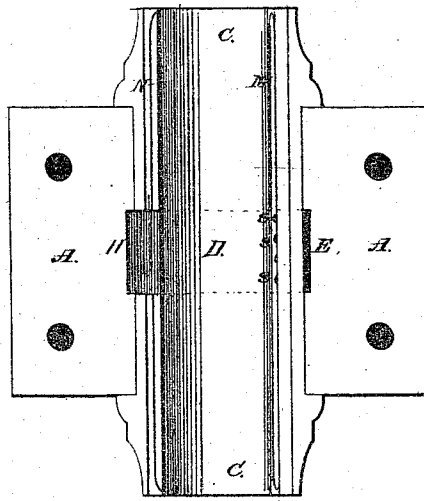


Fig. 2.

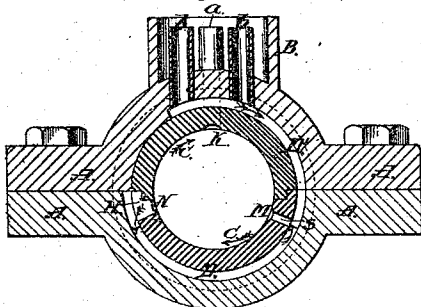
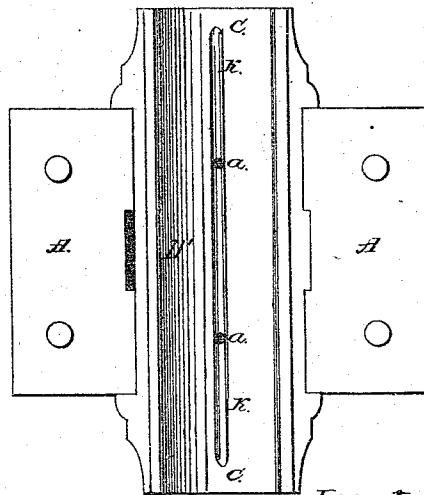


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

DAVID A. DEMING AND STERLING W. WICKES, OF SENECA FALLS, NEW YORK, ASSIGNOR TO H. C. SILSBY, OF SAME PLACE.

IMPROVEMENT IN JOURNAL-BOXES.

Specification forming part of Letters Patent No. 158,575, dated January 12, 1875; application filed June 19, 1873.

To all whom it may concern:

Be it known that we, DAVID A. DEMING and STERLING W. WICKES, of Seneca Falls, New York, have invented an Improvement in the Journal-Boxes of Rotary Steam Engines and Pumps, of which the following is a specification:

The object of our invention is to provide in the journal-boxes of rotary steam engines and pumps a constant supply of oil, and to distribute the same over the journals at the points where it is most needed, without waste.

The following is a description of our invention, reference being had to the accompanying drawings.

Figure 1 is a top view of our device. Fig. 2 is an end view of the same. Fig. 3 is an inside view of the lower half of the box, and Fig. 4 is an inside view of the upper half of the same.

A A are the flanges; B, the oil-box, and C C the bearing. D' is a chamber constructed inside of the upper half of the box, and communicates with the oil-box B by means of the pipes *b b*; and D is a chamber constructed inside of the lower half of the box. These chambers communicate with the journal and bearing by means of the openings H and S S. M M and N N are grooves in the bearing cut in the sides of the lower half of the box, and K K is a similar groove cut in the upper half. The groove K K communicates directly with the oil-box B by means of the pipes *a a*. The groove M M communicates with the chamber D by means of the holes S S S S, and the groove N N by means of the opening H. The chamber D' connects with the chamber D when the two parts of the box are joined together.

A portion of the oil from the box B is carried by the pipes *a a* directly to the journal, and is distributed, by means of the groove K K, over its entire length. The rest of the oil from the box B enters the upper chamber, D', through the pipes *b b* and fills both chambers.

The journal revolving in the direction of the arrows, as shown at C C in Fig. 2, carries with it the oil that it has received directly from the pipes *a a*, and, by its motion, creates a suction through the holes S S. By this means the oil which is in the lower chamber, D, is drawn through the holes S S, and, by means of the groove M M, is brought into contact with the entire length of the journal.

In the groove N N there is an opening, H, which opens downward into the lower chamber, D. The upper edge of the groove N N, which is formed by the lower edge of the upper half of the box, is made sharp, and in such a manner as to scrape the oil from the journal as it revolves. This oil then collects in the groove N N, and passes through the opening H into the lower chamber, D, whence it is drawn in the direction of the arrows, as shown in Fig. 2, to the vacuum at S S created by the revolution of the journal.

The journal is thus constantly supplied with oil, which, by means of the grooves, is equally distributed, and the surplus oil, which would otherwise work out at the ends of the bearings, passes through the opening H and is used again.

We claim as our invention—

1. The combination, in journal-boxes of rotary steam engines and pumps, of the chambers D' and D with the pipes *b b*, the opening H, and the holes S S, substantially as and for the purposes hereinbefore described.

2. The grooves K K, M M, and N N, the pipes *a a*, the opening H, and the holes S S, when the several parts are combined in journal-boxes of rotary steam engines and pumps, in the manner and for the purposes substantially as specified.

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Witnesses:

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