

W. C. CROSS.

Improvement in Spindle Steps.

No. 124,255.

Patented March 5, 1872.

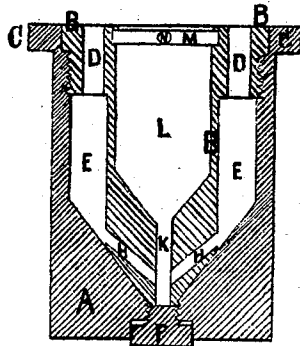


Fig. 1

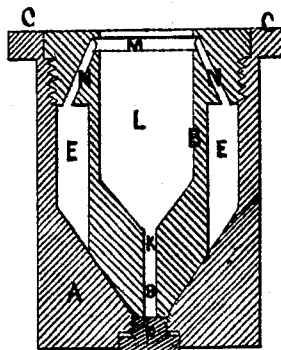


Fig. 2

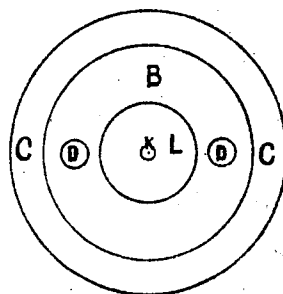


Fig. 3

WITNESSES

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WILLIAM C. CROSS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND EPHRAIM C. CROSS, OF SAME PLACE.

IMPROVEMENT IN SPINDLE-STEPS.

Specification forming part of Letters Patent No. 124,255, dated March 5, 1872.

To all whom it may concern:

I, WILLIAM C. CROSS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful "Step" or Vertical Journal-Box, of which the following is a specification:

The Nature of the Invention.

The nature of my invention may be best understood by reference to the accompanying drawing and the following specification.

Description of the Accompanying Drawing.

Figure 1 is a vertical section of my improved step. Fig. 2 is a vertical section of the same taken on a plane at right angles to the plane of the section of Fig. 1. Fig. 3 is a plan.

General Description.

My invention is for that class of supports or bearings for revolving vertical shafts called "steps."

In the drawing, B represents the step, the hollow chamber L of which receives the lower end of the shaft. The outer chamber E, formed by the outside of the step and the interior of the housing A, constitutes an oil-cup. D D, Fig. 1, are holes for filling the cup E E with oil. The upper end of the chamber L is provided with a fillet or circular recess, M, into which dust and surplus oil may gather from the revolving shaft. Two channels, N N, Fig. 2, lead from the fillet M to the oil-chamber E, through which the overflowing oil may descend.

K is a small duct leading from the bottom of the chamber L through the step, as shown. H H, Fig. 2, are small ducts leading from the oil-chamber E to the duct K, and thence to the chamber L. P is a set-screw, made sufficiently strong to support, in connection with the screw-thread at the top of B, the weight of the step B and the shaft within it. By this arrangement it will be seen that, as the step or shaft becomes worn, the step may be moved upward vertically, so as to make up for the loss by wear. To adjust the step, I have only to unscrew it so that it shall rise to the desired height, and then to move up the set-screw P until it comes to a bearing.

The operation of the oiling device is so obvious as scarcely to need explanation. The chamber E being full, the oil will have a tendency to flow upward around the shaft in L, and thus keep it always lubricated, the surplus oil flowing back through the ducts N N. The ducts K H H may be cleared out by removing the screw P and inserting a wire.

I claim as my invention—

The combination of the step B with the housing A, when constructed and applied together, as specified, so as to form an annular chamber, E, communicating, by ducts N N and H H, with the journal, and also provided with the screw-plug P, the whole arranged to operate substantially as described.

Witnesses: WILLIAM C. CROSS.

WILLIAM EDSON,

FRANK G. PARKER.