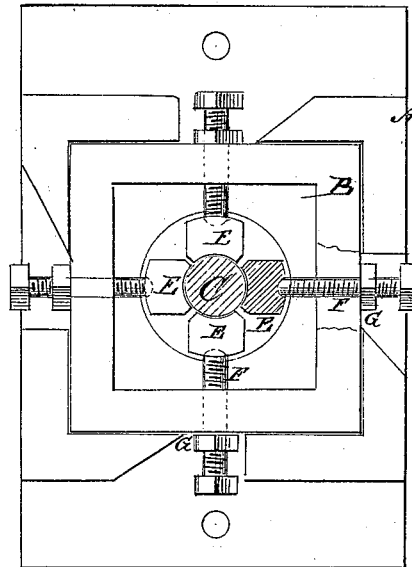
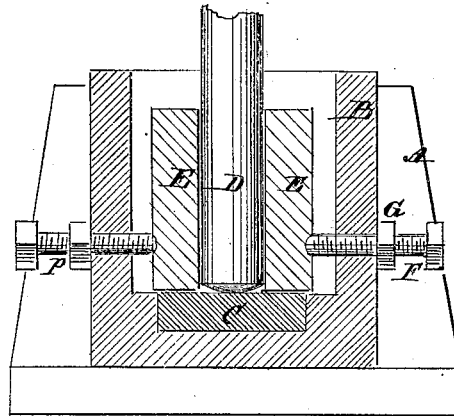


W. G. NORMENT.
Mill Spindle Step.

No. 111,768.

Patented Feb. 14, 1871.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM GILES NORMENT, OF DYERSBURG, TENNESSEE.;

IMPROVEMENT IN STEPS IN TRAM-BOXES FOR MILL-SPINDLES.

Specification forming part of Letters Patent No. **111,768**, dated February 14, 1871.

To all whom it may concern:

Be it known that I, WILLIAM GILES NORMENT, of Dyersburg, in the county of Dyer and State of Tennessee, have invented a new and useful Improvement in Step and Tram-Box; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to mill-spindles and upright shafting; and consists in a combination of parts whose purpose is to admit both of tramming and of the adjustment of the spindle independently of the tram-box.

I will first describe my invention in connection with all that is necessary for a full understanding thereof, and then clearly point it out in the claim.

In the accompanying drawing, Figure 1 represents a vertical section of my improvement, taken on the line *xx* of Fig. 2. Fig. 2 is a top or plan view.

Similar letters of reference indicate corresponding parts.

A is the bridge-tree, which is secured to the timber or foundation in the usual manner. B is a tight box, which is fitted into the recess in the bridge-tree, upon the bottom of which is the steel step-plate C. D is the step-point of the spindle or upright shaft. E represents the sectional box, each section with a concave side to fit the point, as seen in the drawing. F represents adjusting-screws, which work through the sides of the box B as through nuts, the ends of which engage with the backs of the sections E, as seen. G are jam-nuts on

these set-screws to hold the screws in place when the spindle or shaft has been properly adjusted.

By reason of the setting or movement of the foundation, the shrinkage of timber, and other causes, it is often necessary to tram or adjust laterally the step ends of mill-spindles and upright shafts, so as to keep them in a true perpendicular position, or to make the gearing mesh properly. This is ordinarily done by moving the bridge-tree, but this is disturbing the ground-work, and is objectionable on many accounts.

By my improvement the step end of the spindle or shaft is readily moved or adjusted laterally by means of the adjusting set-screws F. The box-sections E, being confined by no guides, are entirely free to move either toward or from the center. The box B having a perfectly tight bottom will retain oil or other lubricating material for any desired length of time, so that the point is constantly self-lubricated.

The advantages of my arrangement will be readily understood by millwrights and all who are acquainted with this class of machinery.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The bridge-tree A, tight box B, and inwardly-concave sections E, combined, as described, with screws F and jam-nuts G, to admit of both tramming and adjusting the spindle itself, as described.

WM. GILES NORMENT.

Witnesses:

JNO. B. YORK,
F. E. DAVIS.