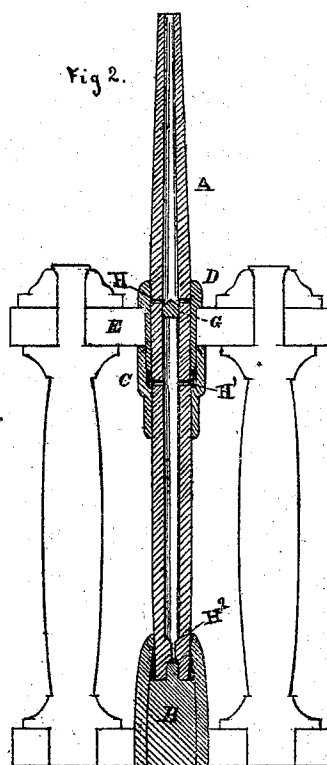
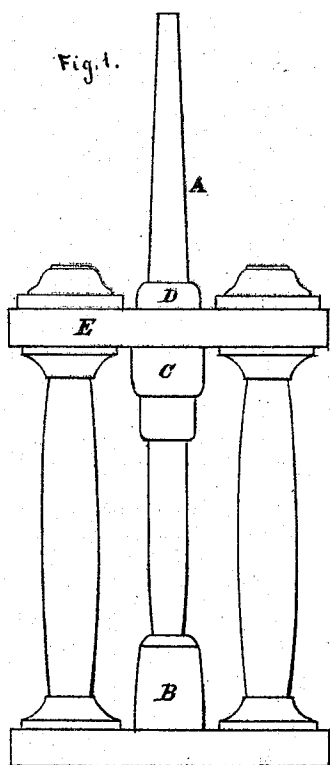


~ Clark L. Austin's ~
Improved Spindle

No. 118,422.

Patented Aug. 29, 1871.



Witnesses,
W. E. Raymond
H. A. Daniels

Clark L. Austin Inventor,
by C. S. Whitman Attorney
529 Seventh St.,
Washington D.C.

UNITED STATES PATENT OFFICE.

CLARK L. AUSTIN, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN SPINDLES AND BEARINGS FOR SPINNING-FRAMES.

Specification forming part of Letters Patent No. 118,422, dated August 29, 1871.

To all whom it may concern:

Be it known that I, CLARK L. AUSTIN, of Lawrence, in the county of Essex and in the State of Massachusetts, have invented an Improvement in Spindles; and do hereby declare that the following description, taken in connection with the accompanying drawing hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to secure by Letters Patent.

My invention relates to spindles made use of for twisting or spinning yarn; and the nature thereof consists in certain improvements and modifications in the construction of the same, hereinafter described and shown.

In the accompanying drawing, which illustrates my invention and forms a part of the specification thereof, in which corresponding parts are illustrated by similar letters—

Figure 1 is a front elevation of my invention; Fig. 2, a vertical section thereof.

The construction, operation, and relative arrangement of the component parts of my invention are as follows:

The spindle A is hollow, as shown in Fig. 2, and is stepped upon the bearings B attached to the step-rail by means of a set-screw or otherwise. Rigidly attached to the outer surface of the said spindles is the oil-cup C. D designates the bol-

ster or upper bearing of the spindle, which is attached to plate E by means of a set-screw. When it is desired to lubricate the bearings, oil is introduced into the opening at the top of the spindle, which passes downward until it comes in contact with the conical diaphragm G, by which it is deflected through apertures H to the outer surface of the spindle and into the cup C. After thus serving to lubricate the upper bearing the oil is deflected inward through the apertures H¹ to the inside of the spindle and passes downward to the lower bearing B and cup through the aperture H².

I am aware that hollow spindles have been heretofore used, and that openings in the same for the egress and ingress of oil have been shown in United States patents.

I therefore claim and desire to secure by Letters Patent—

The hollow spindle A, open at its top and provided with the apertures H, H¹, and H², the bolster D, oil-cup C, and step B, all constructed, arranged, and operating as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 7th day of April, 1871.

CLARK L. AUSTIN. [L. S.]

Witnesses:

W. H. MUNROE,
J. W. WILBUR.