

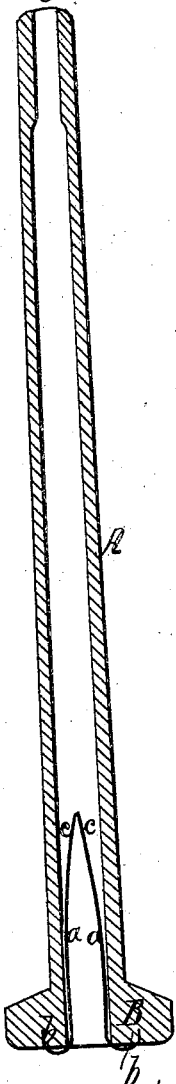
J. Goulding.

Bobbin.

N^o 50,116.

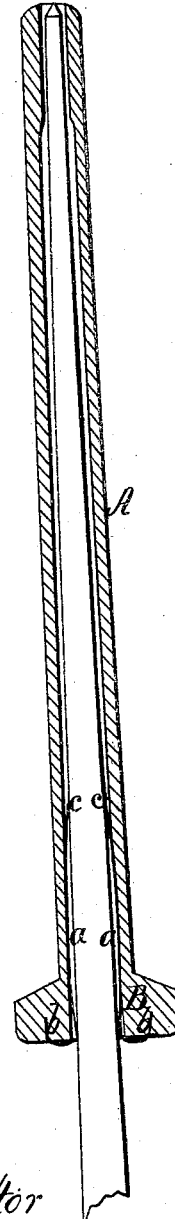
Patented Sept. 26, 1865.

Fig. 1.



Witnesses;
Thos. H. Dodge
H. L. Fuller

Fig. 2.



Inventor
John Goulding

UNITED STATES PATENT OFFICE.

JOHN GOULDING, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN BOBBINS FOR SPINNING.

Specification forming part of Letters Patent No. **50,116**, dated September 26, 1865.

To all whom it may concern :

Be it known that I, JOHN GOULDING, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Bobbins; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal section of my improved bobbin. Fig. 2 represents a similar view of my improved bobbin and part of a spindle, and Fig. 3 represents a perspective view of a modified form of spring to be inserted in the base of the bobbin to prevent its turning upon the spindle.

In the drawings, A represents a section of a bobbin, to the base B of which are applied two metal springs, made in curved form at their upper ends, *c c*. These springs *a a* are bent at the bottom, and the bent or hooked ends *b b* are inserted or driven into the base of the bobbin, as fully shown in the drawings. The ends *c c* of the springs *a a* approach or spring toward

each other when the bobbin is removed from the spindle, while they clasp the spindle when the bobbin is applied as shown in Fig. 2, so that the bobbin and spindle turn together.

Instead of using springs like those shown in Fig. 1, a spring may be used stamped or cut from a thin plate of steel or other metal and bent in proper form, as shown in Fig. 3, in which case the projecting lip *d* should be driven into the base of the bobbin in order to hold the spring in place. The ends *e e* being curved or bent toward each other would clasp the spindle and keep the bobbin from turning.

Having described my improved bobbin, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

The combination of a metal spring or springs with the base of the bobbin, substantially as and for the purposes set forth.

JOHN GOULDING.

Witnesses:

THOS. H. DODGE,
H. L. FULLER.