

J. S. CROWLEY.
Bobbin.

No. 205,246.

Patented June 25, 1878.

Fig. 1.

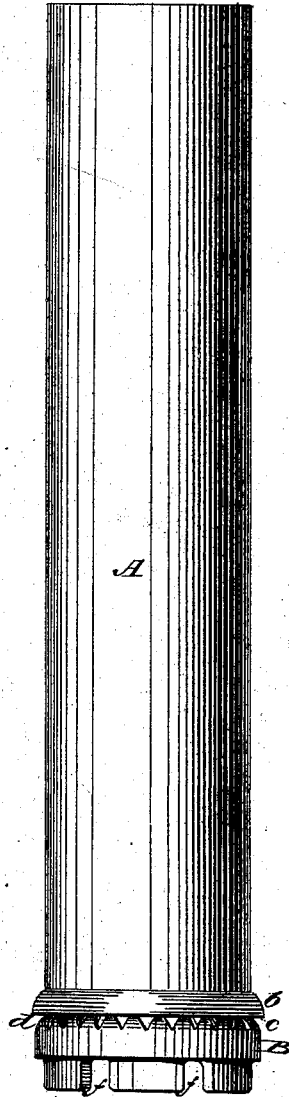
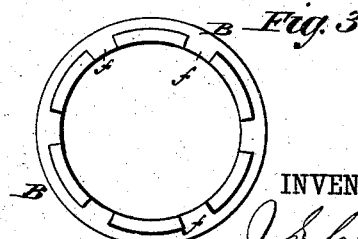
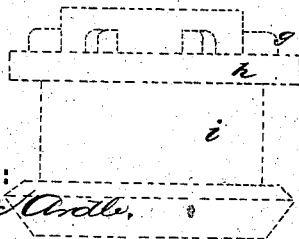
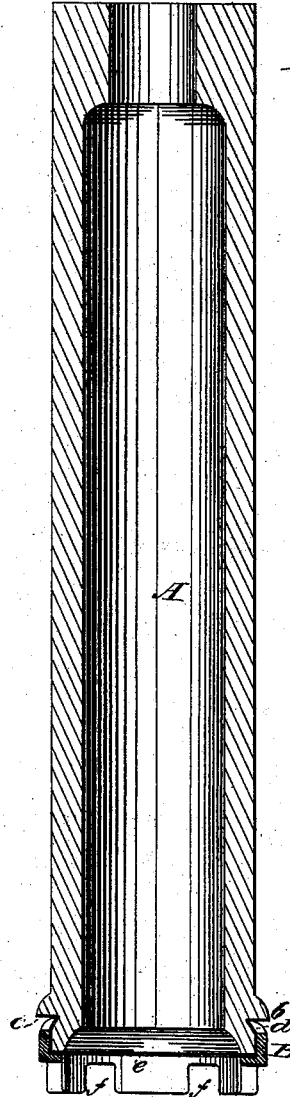


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN S. CROWLEY, OF MANCHESTER, ENGLAND.

IMPROVEMENT IN BOBBINS.

Specification forming part of Letters Patent No. **205,246**, dated June 25, 1878; application filed March 29, 1878.

To all whom it may concern:

Be it known that I, JOHN SIDNEY CROWLEY, of Manchester, England, have invented a new and useful Improvement in Bobbins, of which the following is a specification:

Figure 1 is a side elevation of a bobbin having my improvements. Fig. 2 is a longitudinal section. Fig. 3 is an inverted plan view.

Similar letters of reference indicate corresponding parts.

The object of my invention is to protect wooden bobbins used in the manufacture of textile fabrics.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

Referring to the drawing, A is a wooden bobbin of the usual form, excepting the rounded collar *b* near its lower end and a V-shaped circumferential groove, *c*, formed below the collar *b*.

A metallic ferrule, B, having a thin serrated edge, *d*, is fitted to the bobbin below the collar *b*, and the serrated edge is bent over into the groove *c*. The ferrule has a shoulder, *e*, for receiving the end of the bobbin, and has a number of notches, *f*, for receiving the lugs *g* on the flange *h* of the bobbin-wheel *i*. The

bobbin is bored longitudinally, and when dropped on a spindle the notches in the ferrule engage the lugs on the bobbin-wheel, as before mentioned.

Instead of notching the ferrule it may have one or more lugs or pins projecting from its lower edge, which will be received and carried by one or more lugs on the flange of the bobbin-wheel, or by holes or recesses formed in the flange.

I do not limit or confine myself to the exact form and proportions herein described, as these may be varied without departing from my invention.

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

The combination, with the bobbin, having collar *b* and notch *c*, of the ferrule B, having serrated edge *d* and shoulder *e*, as shown and described.

JOHN SIDNEY CROWLEY.

Witnesses:

EDWARD BONHOWE,
Solicitor, Manchester, England.
GEORGE BENNETT,
His Clerk.