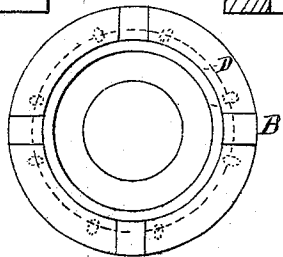
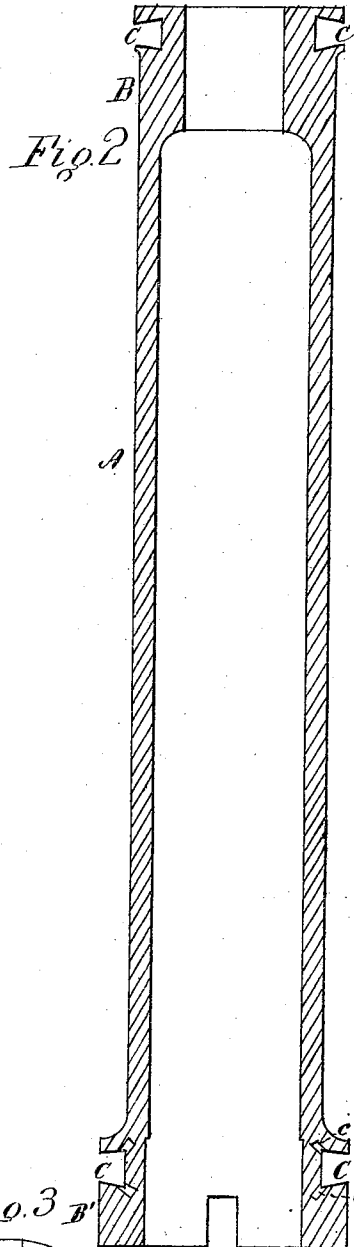
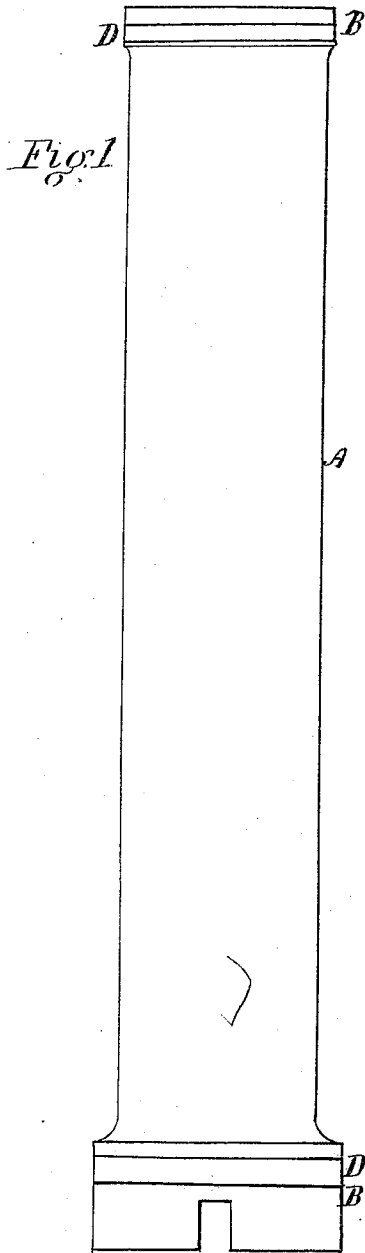


T. G. McLAUGHLIN.
Bobbins.

No. 141,575.

Patented August 5, 1873.



Witnesses.
J. B. Connolly
A. Connolly.

Inventor:
Thos. G. McLaughlin
by Connolly Bros
attys

UNITED STATES PATENT OFFICE.

THOMAS G. McLAUGHLIN, OF GLEN RIDDLE, PENNSYLVANIA.

IMPROVEMENT IN BOBBINS.

Specification forming part of Letters Patent No. **141,575**, dated August 5, 1873; application filed May 28, 1873.

To all whom it may concern:

Be it known that I, THOS. G. McLAUGHLIN, of Glen Riddle, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Bobbins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

In the accompanying drawings, Figure 1 is a side elevation of a bobbin provided with my improvement. Fig. 2 is a vertical central section, and Fig. 3 is an end view of the same.

My invention has for its object to prevent the breakage of bobbins. The nature of my invention consists in the construction of a metallic ring cast in a groove in the bobbin, said ring being formed with projections, by which it is more thoroughly consolidated with the wood of the bobbin, as hereinafter fully described.

Referring to the accompanying drawing, which illustrates my improvements, A represents a bobbin, and B and B' the ends thereof, the latter being the driving end. C C are grooves formed in the ends or heads, these grooves being widest at their interior diameter or base, whereby the metallic rings D D, which are cast in said grooves, are prevented from becoming separated from the sides of the bobbin by reason of the compression of the same from any cause, or owing to the shrinkage of the wood of the bobbin. To compensate for the loss of the bobbin's strength, due to forming the groove in its driving-head, the sides of said groove are formed with recesses *c c*, into which the metal flows in the process of casting the ring, thereby consolidating said ring with the wood of the bobbin and equalizing the strain incident to the bobbin's being

revolved by a single driving-lug acting in one of the notches formed in the base.

I have illustrated a bobbin with a ring applied to each end, the driving-head or base, and top. In practice, however, I think a single ring—that in the base—will be found sufficient, as bobbins are but rarely split at the top, the force tending most to split bobbins being the torsion to which the wood thereof is subject by a single driving-lug acting in one of the notches in the driving head or base.

By means of a ring or rings thus constructed and applied the fullest protection consistent with the least weight of metal is provided against the several strains of expansion, contraction, and torsion to which bobbins are subject. The ring itself, in a general sense, prevents the bobbin from being split by expansion or by a force applied to the inside of the wood. The formation of the grooves, widest at their interior diameter or base, causes the compressing strain, when such strain is exerted by shrinkage of the bobbins or from other causes, to be thrown upon the metallic band, thereby preventing injurious compression, while the projections upon the ring serve to consolidate the metal and wood, equalizing the strain incident to driving the bobbin by a single lug, and thereby affording protection against injury from torsional force.

What I claim as my invention is—

The ring cast in the driving-head of a bobbin, and provided with projections for consolidating said ring with the wood of the bobbin, as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of May, 1873.

THOS. G. McLAUGHLIN.

Witnesses:

W. H. HOWARD,
RICHARD P. NEILL.