(No Model.)

O. E. WAIT.

SPOOL OR BOBBIN.

No. 344,928. Patented July 6, 1886.

Fig. 1.

Fig. 2.

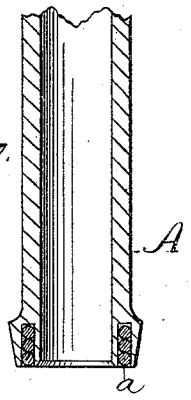

Fig. 3.

Fig. 4.

Fig. 5.

Witnesses.
John Edwards Jr.
Milton H Barrett

Inventor.
Oscar E Wait
By James Shepard
Atty.

UNITED STATES PATENT OFFICE.

OSCAR E. WAIT, OF SPRINGFIELD, VERMONT, ASSIGNOR TO P. W. GOULD, OF SAME PLACE.

SPOOL OR BOBBIN.

SPECIFICATION forming part of Letters Patent No. 344,928, dated July 6, 1886.

Application filed September 24, 1885. Serial No. 178,026. (No model.)

To all whom it may concern:

Be it known that I, OSCAR E. WAIT, a citizen of the United States, residing at Springfield, in the county of Windsor and State of Vermont, have invented certain new and useful Improvements in Spools or Bobbins, of which the following is a specification.

My invention is an improvement in wooden spools or bobbins which are re-enforced by strengthening material let into an annular groove at one end thereof; and the object of my invention is to utilize wire for this purpose, and to firmly secure the same to the wood.

In the accompanying drawings, Figure 1 is an end view of a spool or bobbin which embodies my invention. Fig. 2 is a central longitudinal section of a portion of the same. Fig. 3 is a side elevation of the wire with which said bobbin is re-enforced. Fig. 4 is a side elevation of a wire wound or braided with a fibrous material, and Fig. 5 is a perspective view of the same cut into suitable lengths and bent into rings for a re-enforce.

A designates a spool or bobbin, in one end of which is an annular groove filled by re-enforce *a*. This re-enforce is formed of wire, a fibrous material, and cement. I prefer to combine the fibrous material with the wire by first winding or braiding the wire with the fibrous material in continuous lengths, as shown in Fig. 4. This fibrous material is thoroughly saturated with glue or other adhesive cement. The covered wire is wound into the form of a helix of any desired length, and then cut into short sections of about three coils each, like Fig. 3, with the single exception that said figure shows a naked wire. The form, however, is precisely the same as that of a like section of covered wire. I prefer to apply the glue or cement after a section has been cut from the helix of covered wire. The combined wire, fibrous material, and cement is firmly pressed into the annular groove to form the re-enforce *a*. There should be a sufficient amount of the fibrous material to fill all the interstices within the groove. The portions which surround the wire within the groove in Fig. 2 are intended to represent the combined fiber and cement. When the cement is properly hardened, it firmly adheres to the wood and fiber, and binds the wire firmly in place.

Another manner of forming the re-enforce is illustrated in Fig. 5. The wire is wound or braided in continuous lengths, and then formed into rings, which are placed within the annular groove at the end of the bobbin, one upon the other, so as to break joints, as indicated in Fig. 5. Before thus placing the rings within the groove the fibrous material is thoroughly saturated with cement. The rings thus cemented and placed are firmly pressed, so as to cause the fibrous material to fill the interstices.

I have herein illustrated and specifically described two different ways of preparing the combined fiber and wire; but it may be prepared in other ways, and produce substantially the same article.

I do not claim, broadly, a spool or bobbin having a re-enforce secured within an annular groove at the end of the bobbin, as I am aware that the same is old.

I claim as my invention—

The herein-described spool or bobbin, having an annular groove at one end filled by a re-enforce composed of wire, fibrous material, and cement, substantially as described, and for the purpose specified.

OSCAR E. WAIT.

Witnesses:

MERRILL L. LAWRENCE,

ALICE M. WHEELER.