O. E. WAIT.

BOBBINS.

No. 195,060. Patented Sept. 11, 1877.

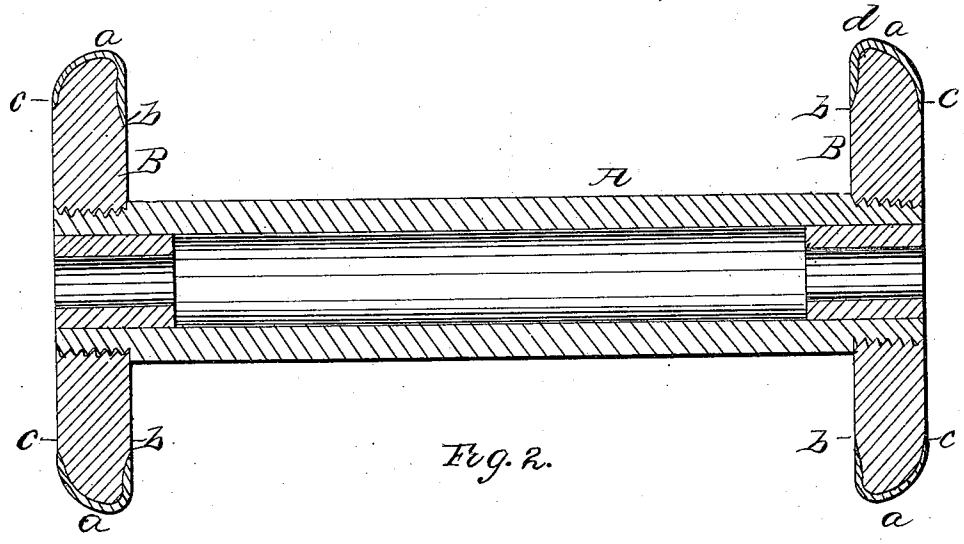

Fig. 2.

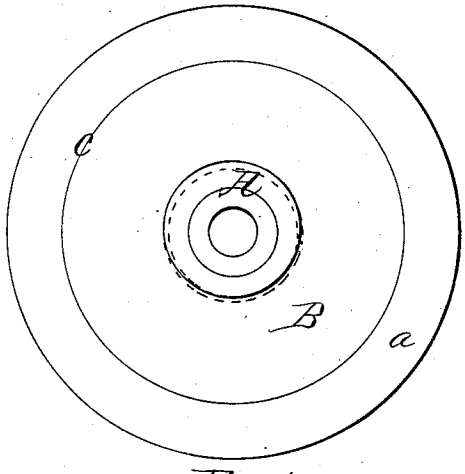

Fig. 1.

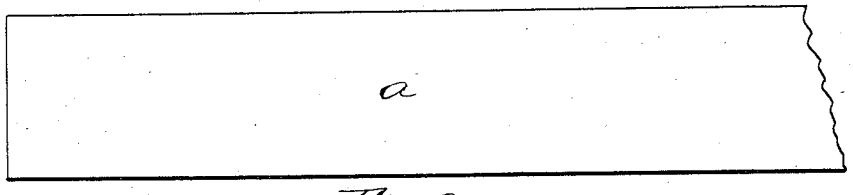

Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN BOBBINS.

Specification forming part of Letters Patent No. **195,060**, dated September 11, 1877; application filed May 31, 1875.

To all whom it may concern:

Be it known that I, OSCAR E. WAIT, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in the Manufacture of Spools and Bobbins, of which the following, taken in connection with the accompanying drawings, is a specification.

My present invention relates to the application of rawhide to the heads or flanges of spools or bobbins; and has for its object the production of a better spool or bobbin than can be made from wood alone, and at a less cost than heretofore where rawhide has been used; and my said invention is an improvement upon the invention patented to F. E. Darrow and myself, November 3, 1874; and it consists in protecting the outer rounded edge of the head of a spool or bobbin by means of narrow ribbons or strips of rawhide, having parallel edges, wound circumferentially around the spool or bobbin-head, and at the same time turned radially down around said rounded edge upon either side thereof, and firmly secured thereto by glue or other suitable adhesive material, the outer portions of the inner surface of said head or heads being reduced to make room for the rawhide, the hide having been previously prepared, by soaking it in water or otherwise, to make it pliable and to swell it, so that the shrinkage thereof, when it dries, after having been secured to the bobbin or spool, will cause it to hug closely to the wood, thus adding greatly to the strength of the spool or bobbin head.

My invention further consists in the use of a spool or bobbin having the outer portion of the inner face of its head or heads reduced in thickness to an amount about equal to the thickness of the rawhide to be added, in combination with a ribbon of rawhide wound circumferentially around said head and wrapped radially around the rounded edge of said head, as will be described.

Figure 1 of the drawings is an end view of a spool having my invention applied thereto. Fig. 2 is a central longitudinal section of the same; and Fig. 3 is a small portion of a ribbon of rawhide of suitable width for covering the rounded edge of the spool-head.

In the manufacture of spools having large heads, such as shown in Figs. 1 and 2, the barrel A and heads B are made of wood, united in the usual manner, and the whole turned to the usual shape, except that the outer rounded edge and a portion of the inner radial face of the head contiguous to the rounded edge are reduced in thickness an amount about equal to the thickness of the hide *a* with which it is to be covered.

A ribbon of rawhide, suitably prepared, and of a width equal to the distance from the point *b* on the inner face of the head, measuring radially outward and around the rounded edge of the head to the point *c*, and having one side coated with glue or other adhesive material, is then wound circumferentially around the head, while at the same time its two edges are folded down around the curved edge of the head. Suitable clamps are then applied to hold the hide in place, and press it closely into contact with the wood, and are allowed to remain till the glue and the hide are thoroughly dried, when they are removed, and the spool placed in a lathe, and the outer surface of the hide is turned to remove any irregularities in its outer surface.

This is a very great improvement over the manner of applying the hide illustrated in the patent hereinbefore cited, for the reasons that while it costs less, on account of the reduction of the amount of hide used, it serves practically every beneficial purpose that was gained in that, by covering the whole inside of the spool-head with rawhide, and when applied to spools or bobbins having large thin heads is very superior to the former invention, because when the whole inside of the head is covered with rawhide, as illustrated in the patent before cited, the contraction of the large surface of rawhide upon the inside of the head, in drying, is very liable to cause the thin head to warp, which effectually ruins the spool or bobbin for practical use.

This difficulty is entirely overcome by using my present invention, if care is taken to so

apply the ribbon of hide that about an equal amount of the hide shall be upon each side of the head.

Another advantage of this method of applying the rawhide to a spool or bobbin head having a rounded edge is, that it is much more easily applied in the form of a ribbon or band wrapped around the edge of the head, as described, (so that the crimping or wrinkling is equally divided between the two edges,) than when applied in the form of a disk secured to the inner face of the head, and its outer edge turned over the rounded edge of the head, as was the case in the invention before cited.

What I claim as new, and desire to secure by Letters Patent of the United States, is as follows:

A spool or bobbin made of wood, and having the outer rounded edge of its head or heads reduced from *b* to *d*, and covered with a ribbon or band of rawhide wound circumferentially around the same, and having its two edges turned down over said rounded edge to cover about equal portions of either side of the head, and secured thereto by glue or other suitable adhesive material, substantially as described.

Executed at Boston this 17th day of May, 1875.

OSCAR E. WAIT.

Witnesses:
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