No. 700,176. Patented May 20, 1902.

E. B. CROCKER.

SPOOL OR BOBBIN.

(Application filed July 3, 1901.)

(No Model.)

Fig. 1.

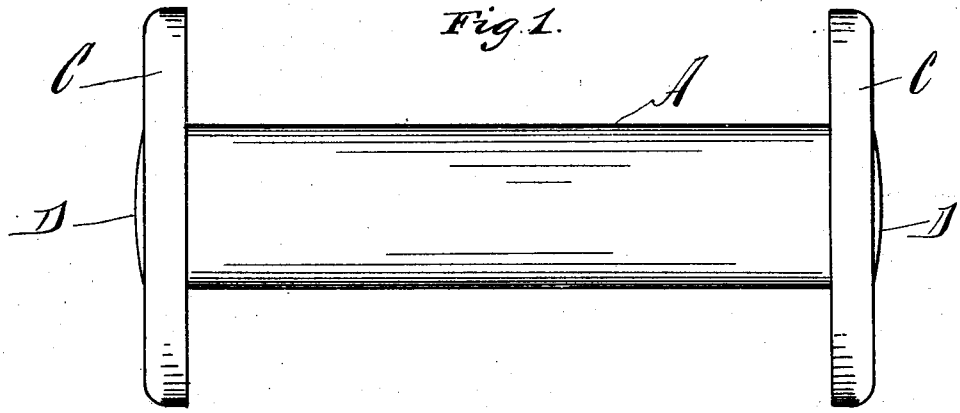


Fig. 2.

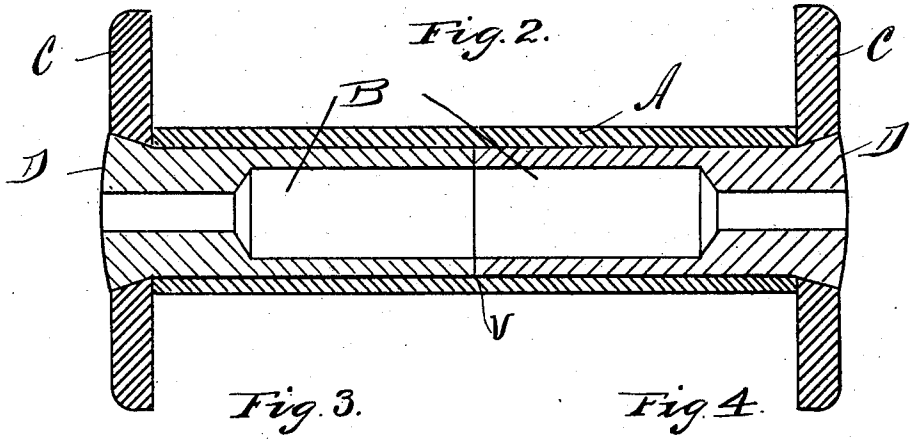


Fig. 3.

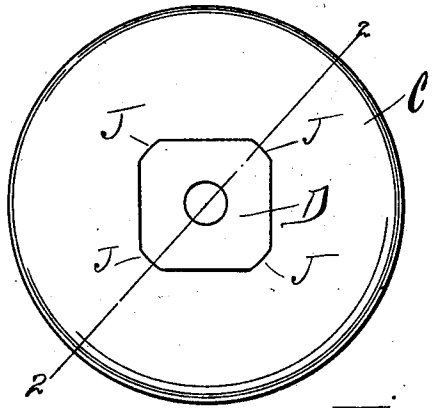


Fig. 4.

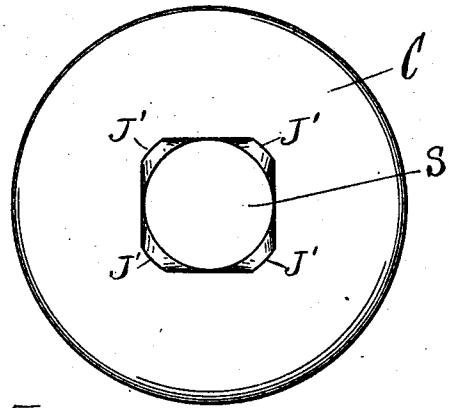
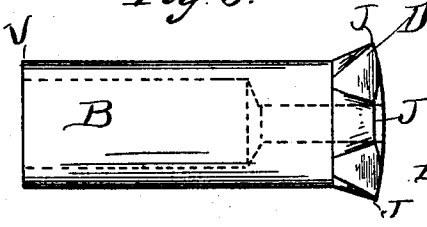


Fig. 5.



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UNITED STATES PATENT OFFICE.

EUGENE B. CROCKER, OF PROVIDENCE, RHODE ISLAND.

SPOOL OR BOBBIN.

SPECIFICATION forming part of Letters Patent No. 700,176, dated May 20, 1902.

Application filed July 3, 1901. Serial No. 66,990. (No model.)

To all whom it may concern:

Be it known that I, EUGENE B. CROCKER, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Spools or Bobbins; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the spools and bobbins used in textile machinery, and has reference especially to the manner of constructing them.

It has for its object to produce a spool that shall be more durable than those made in the usual way and at the same time less expensive to make.

It is fully explained and illustrated in this specification and the annexed drawings.

Figure 1 is a front elevation of the spool. Fig. 2 shows a longitudinal section through the center of the spool on line 2 2, Fig. 3. Fig. 3 is an end elevation of the spool. Fig. 4 shows one of the heads of the spool separate. Fig. 5 shows a side elevation of one of the bushing-blocks.

The construction of the spool is as follows: The barrel A is made, preferably, of a short section of stiff paper tube. The heads C C are made with the usual contour, of paper or other suitable material, each having a hole S made through their centers of the same diameter as the inside of the barrel A.

D represents a bushing or block, of which there are two, one for each end of the spool. These bushings are preferably made of wood or some material having a straight longitudinal fiber. The bushings (see Fig. 5) are made of the same outside diameter as the inside of the barrel A, so as to fit tightly in the barrel, except at one end, where a head beveled inwardly is made. This head is cut away flat on one or more sides of the bushing down to the same level as the outside of the rest of the bushing, leaving the parts J (see Fig. 5) projecting to enter recesses J′ (see Fig. 4) made in the sides of the holes S on the outsides of the heads to prevent the heads from working loose and turning around on the bushings. The inner ends of the bushings are chambered out in the usual way to make the spool lighter and prevent any change in shape from causing the spool to bind on the spindle.

In putting together the parts of the spool, the bushings D are first coated with glue on the outside for its whole length and on the inner end at V, then the two bushings are forced through the heads into the barrel A, one at each end simultaneously, until the ends V meet in the middle of the barrel and the ends of the bushings are about flush with the outside of the head. This makes a very light, strong, and durable spool, as the glue on the bushing in the barrel and head holds the parts firmly together, and the loosening and turning of the heads which is the greatest objection to the present spools, is wholly prevented by my means of keying them by the projection on the bushings.

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

A spool consisting of the combination of a tubular barrel, two heads having central apertures of the same diameter as the inside of said barrel, bushings fitting tightly in said barrel, and having inwardly-beveled heads cut down to the level of the surface of the bushing on one or more sides to form projections, there being recesses made in the outside of each head around the hole to receive those parts of the head of the bushing not cut away, substantially as described.

In testimony whereof I have hereunto set my hand this 1st day of July, A. D. 1901.

EUGENE B. CROCKER.

In presence of—

E. S. MARSH,

BENJ. ARNOLD.