(No Model.)

G. D. LEONARD.

SPOOL.

No. 368,675. Patented Aug. 23, 1887.

Fig. 1.

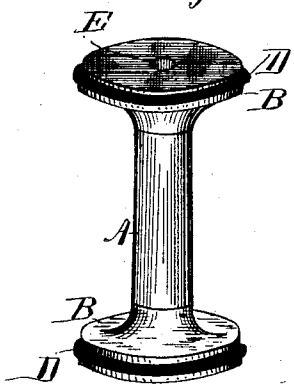


Fig. 2.

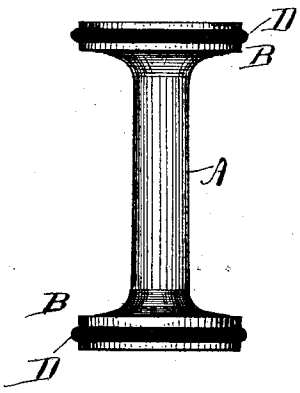


Fig. 4.

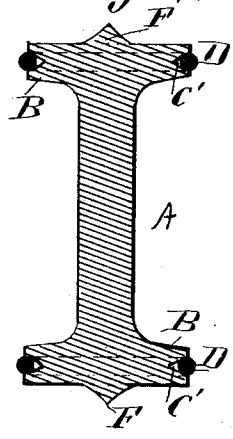
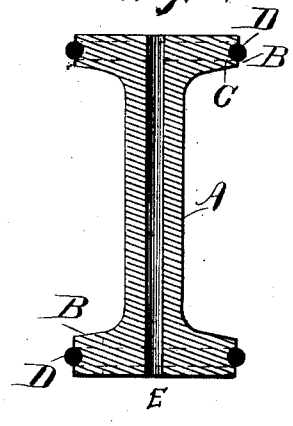


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE D. LEONARD, OF NORTHAMPTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JOHN N. LEONARD, OF SAME PLACE.

SPOOL.

SPECIFICATION forming part of Letters Patent No. 368,675, dated August 23, 1887.

Application filed December 29, 1886. Serial No. 222,912. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. LEONARD, residing at Northampton, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Spools, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to spools or bobbins; and it consists in the construction and combination of parts hereinafter described, and pointed out in the claim.

Figure 1 is a perspective view of a spool made according to the principles of this invention, having an elastic ring surrounding the spool at each end. Fig. 2 is a side elevation of the same. Fig. 3 is a central longitudinal section of a spool with the elastic rings at each end. Fig. 4 is a longitudinal section of a spool, showing a form of groove which may be made in the ends of the spool.

A represents the cylindrical body of the spool, which may be composed of wood, paper, or any other material of which spools are usually constructed.

B B represent the flanges at the ends of the cylindrical part of the spool.

C indicates a groove, which is cut, turned, molded, or impressed into the peripheral part of the spool-flange. This groove may be rounded at the bottom, as in Fig. 3, or may be V-shaped in section, as at C′, Fig. 4.

D represents a ring of rubber or other elastic material, a little smaller in circumference in its normal condition than the extreme size of the flange B of the spool, but capable of expanding so as pass over the end of the spool. The ring B is round in cross-section, and of diameter greater than the depth of groove C.

E indicates the usual axial perforation in the spool, which may, however, be dispensed with, and the boss or projection F, Fig. 4, may be applied to the spool or bobbin.

The elastic ring D is sprung over the end of the spool, so as to find its permanent seat in the groove C or C′. The ring projects somewhat from the groove, and thus prevents the spools from chafing each other when placed side by side, as the elastic rings only will come in contact when the spools are arranged in trays, as is usually the case for exhibition or shipment. The elastic ring makes a very strong and easily applied device for retaining the end of the thread, which is wound on the spool by simply slipping the ring off the end of the spool, passing the end of the thread through the ring, and putting the ring back in its groove.

It is apparent that for the purpose of retaining the end of the thread a ring at one end only of the spool will suffice.

It is also apparent that the elastic ring at one end of the spool will prevent chafing at that end when the spools are placed side by side in usual manner.

I claim—

The combination, with a spool having a groove in one of its flanges, of an elastic ring resting in said groove, the ring in cross-section exceeding the depth of the groove, so that the outer surface of the ring projects beyond the periphery of the flange and prevents spools from chafing each other when placed side by side, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEO. D. LEONARD.

Witnesses:

D. W. C. SCATES,

C. W. ROWLEY.