

(No Model.)

J. N. KELSEA.  
SPOOL OR BOBBIN.

No. 382,091.

Patented May 1, 1888.

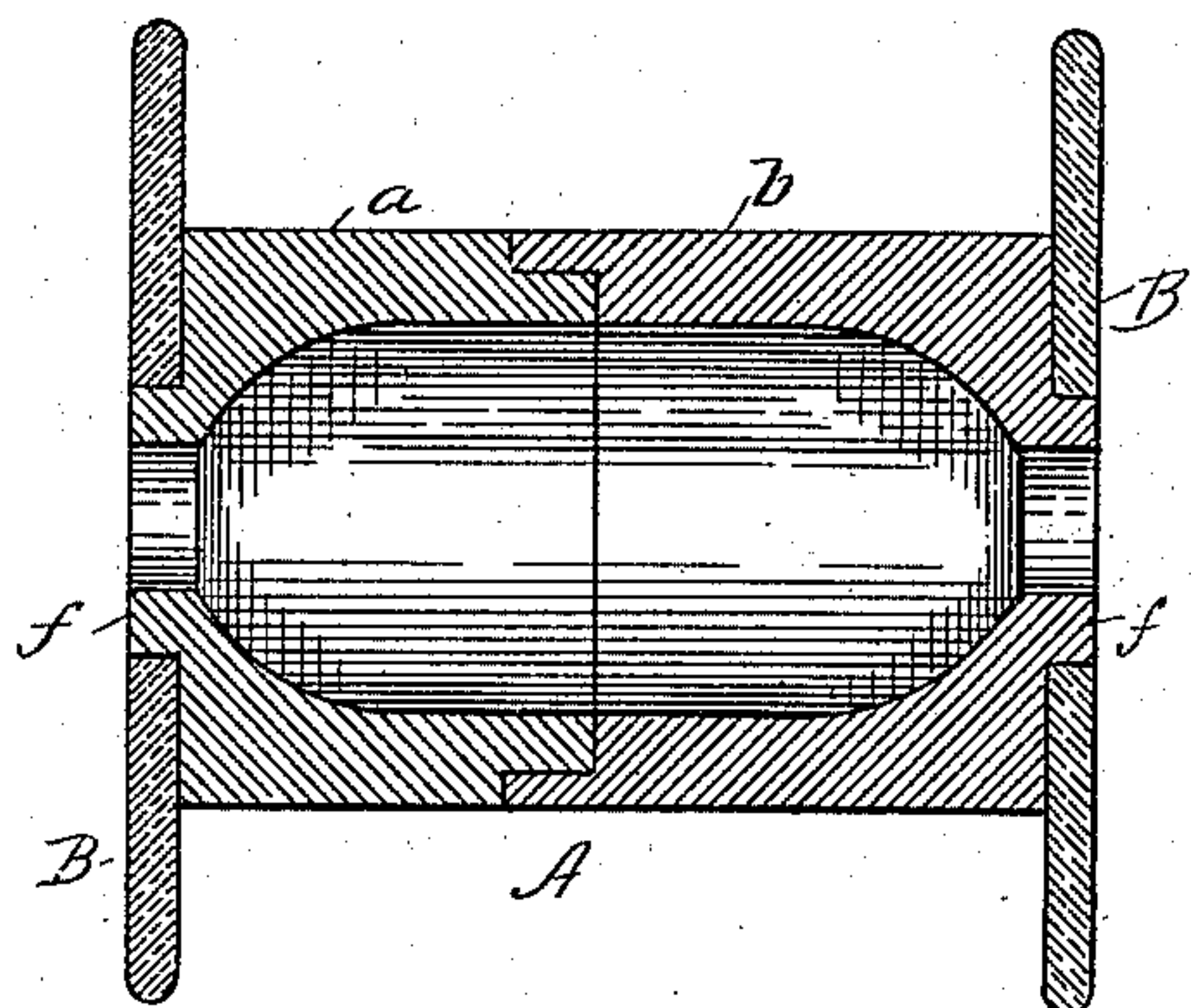


Fig. 1.

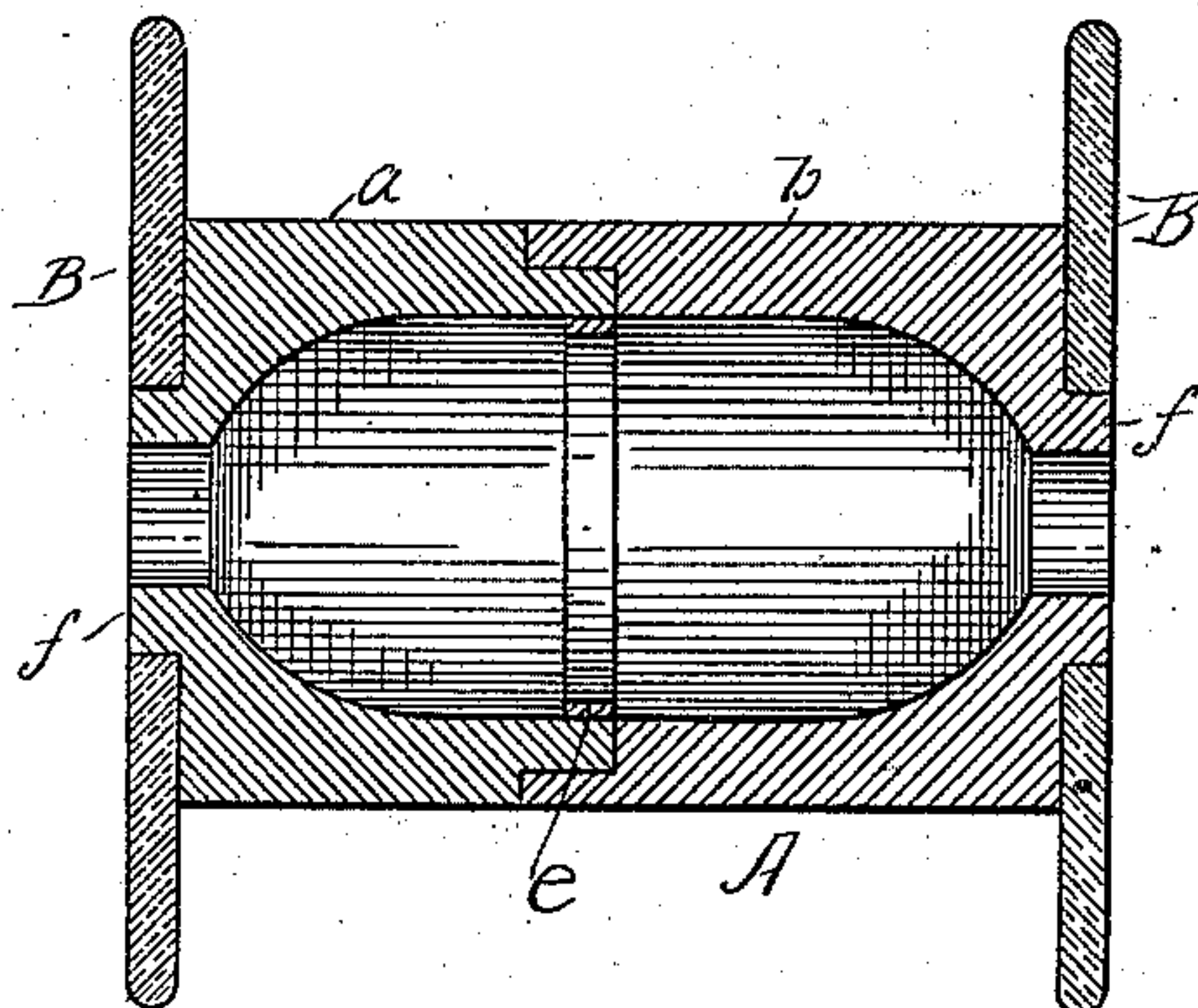


Fig. 2.

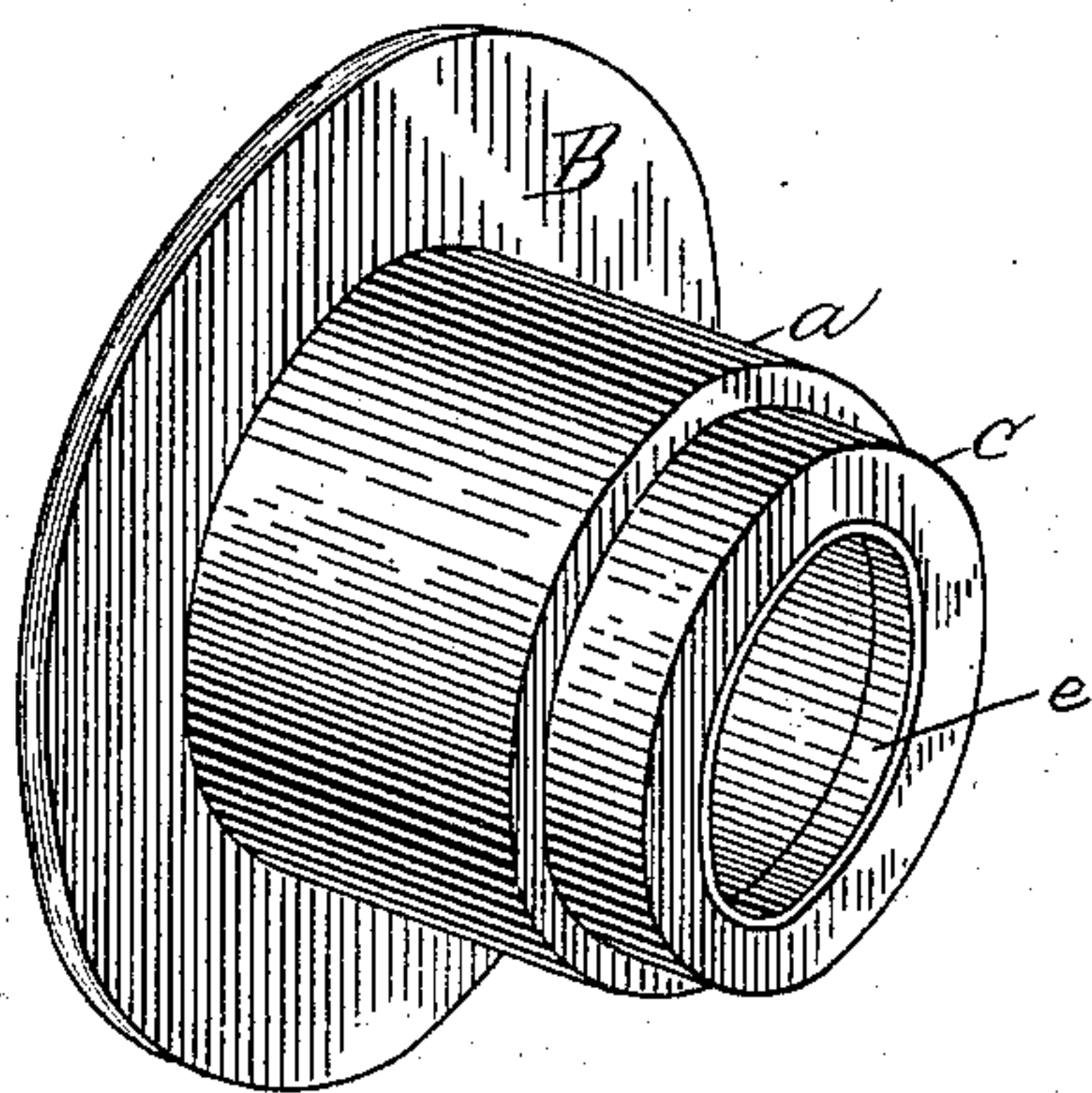


Fig. 3.

WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## SPOOL OR BOBBIN.

SPECIFICATION forming part of Letters Patent No. 382,091, dated May 1, 1888.

Application filed March 19, 1887. Serial No. 231,519. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH NOYES KELSEA, of Antrim, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Spools or Bobbins, of which the following is a specification.

My invention relates to spools or bobbins, and particularly to that class or kind of such devices as are employed in the manufacture of silk.

In the construction of spools or bobbins for the purpose mentioned, it is desirable, among other things, that the article should be light in weight; that the barrel should be strong, so as to withstand the crushing tendency of the threads wound thereon; that the heads should be smooth and durable in order to avoid catching upon and breaking or abrading the threads, and to resist wear and liability of being chipped or otherwise damaged in handling, and that the spool as a whole should be cheap of construction.

It is the object of my invention to meet these requirements in a spool or bobbin for the manufacture of silk, which I do by the improvements hereinafter described and claimed.

Reference is to be had to the accompanying drawings and to the letters of reference marked thereon, forming a part of this specification, the same letters indicating the same parts wherever they occur.

Of the drawings, Figure 1 represents a longitudinal vertical section of a spool or bobbin embodying my invention. Fig. 2 represents a like view of a modified construction of the same. Fig. 3 is a perspective view of the invention, the two parts comprising the barrel being separated.

In the drawings, A indicates the barrel of the spool or bobbin, composed of any suitable material, preferably of wood, and made in two parts, *a b*, the division being at the central point longitudinally of the barrel, and the parts being hollowed or bored out from the division line or meeting ends toward the outer or head ends of the barrel, the hollow or bore in each part being of rounded or conical form toward the head or outer end, while it may be

substantially uniform in diameter at and near the inner meeting end.

The object of boring or hollowing out the barrel of the spool is to reduce the weight of the same, and the purpose of forming the bore as described is to utilize in the best manner the remaining material toward sustaining the barrel of the spool against the crushing tendency of the material wound thereon, such remaining material operating on the principle of an arch; and to secure the form of bore described with facility and exactness the division of the barrel is made.

As a means of uniting the two parts of the barrel, one part—say that indicated by *a*—may be turned down at its inner end, as at *c*, and a corresponding enlargement, *d*, made in the bore of the other part, *b*, and the two parts joined and held by friction; or, if desired, cement may be employed as well.

In some instances I may employ a light metallic ring, *e*, in the interior of the barrel in order to further sustain the latter against crushing strain. This ring can readily be inserted in the barrel—as, for instance, in the end of part *a*—before the parts *a* and *b* are united for use.

B B represent the bobbin heads, composed of that class of compressed paper-pulp known as “leather-board.” These heads are screwed, cemented, or otherwise properly secured on the turned-down ends *f f* of the barrel B, as shown in Figs. 1 and 2, and in addition to being strong and durable, so as to withstand wear and not be easily chipped, nicked, or otherwise damaged in handling, as when they are thrown together in a basket or other receptacle, they can be made with a very smooth polished surface, so as not to be liable to catch upon and break or abrade the thread; and, furthermore, as the material mentioned is quite light of weight, this advantage also is gained.

By constructing a spool-bobbin in the manner described and using therein the material specified I am enabled to attain the objects recited at the outset of this specification; and though I have been particular in describing the form and arrangements of the several parts constituting my improvements, it is obvious that

these may be varied within the limits of mechanical skill without departing from the nature or spirit of my invention.

Having thus described my invention, what I claim is—

1. A spool or bobbin having a hollow barrel constructed in two parts united at a central point, the form of the bore toward the ends of the barrel being conical or rounded, substantially as and for the purposes set forth.

2. A spool or bobbin having a hollow barrel constructed in two parts united at a central point, the form of the hollow or bore being conical or rounded toward the ends of the barrel and enlarged or of substantially uniform diameter through the middle portion of its length, substantially as and for the purposes set forth.

3. A spool or bobbin having a hollow barrel of wood constructed in two parts united at a central point, the meeting ends overlapping, as set forth, in combination with a metallic sustaining-ring, *e*, extending around within the bore of the barrel at a central point only, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 14th day of March, A. D. 1887.

JOSEPH NOYES KELSEA.

Witnesses:

M. E. CAMPBELL,  
J. C. CAMPBELL.