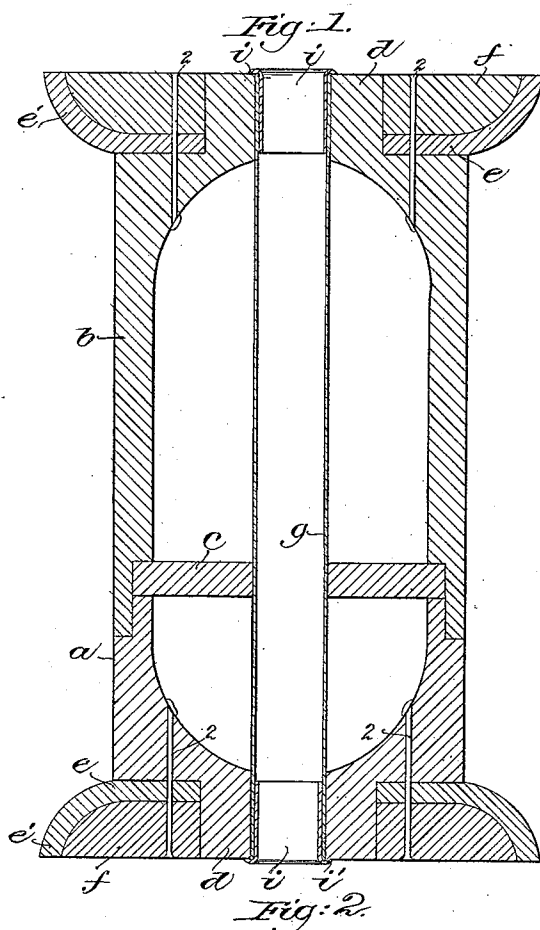
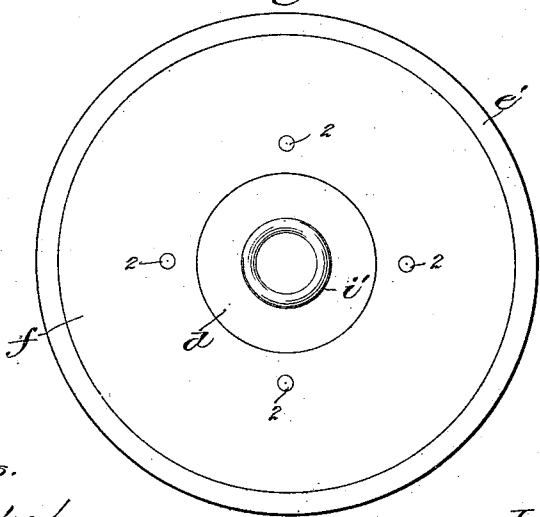


(No Model.)

J. N. KELSEA.
SPOOL.

No. 427,329.

Patented May 6, 1890.



Witnesses.
Fred. Schmitt of
Frederick L. Emery.

Inventor.
Joseph N. Kelsea,
by Leroy & Gregory Attys.

UNITED STATES PATENT OFFICE.

JOSEPH NOYES KELSEA, OF ANTRIM, NEW HAMPSHIRE, ASSIGNOR TO
EDWARD I. K. NOYES, OF CAMBRIDGE, MASSACHUSETTS.

SPOOL.

SPECIFICATION forming part of Letters Patent No. 427,329, dated May 6, 1890.

Application filed March 9, 1889. Serial No. 302,612. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH NOYES KELSEA, of Antrim, county of Hillsborough, State of New Hampshire, have invented an Improvement in Spools, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 This invention has for its object to improve and cheapen the construction of spools, whereby a light, yet strong and durable spool may be produced, especially designed for silk.

The invention consists in the combination,
15 with the barrel of the spool reduced at its ends to leave circular projections, of an independent head made of fibrous material, as leather-board, encircling each of the said projections and rigidly attached to the barrel,
20 the circumferences of the heads being turned outward from the barrel to form flaring ends therefor, substantially as will be described; also, in the combination, with the barrel of the spool having circular hubs on the ends
25 thereof, of heads made of fibrous material, as leather-board, and having each a curved circumferential flange extending outwardly from the barrel of the spool, and a block filling the recess formed between the flange of each
30 head and the hub to present flat-surfaced ends; also, in the combination, with the hollow separable barrel of the spool, of heads having as part thereof a circumferential outwardly-extended upturned flange and independent fastenings, as pins, which pass
35 through the heads and barrel and are clinched or secured within said barrel; also, in the combination, with the two-part separate hollow barrel of the spool, of a disk contained
40 within the barrel and held rigidly between the adjacent ends of its parts as a support for it and independent heads or ends; also, in the combination, with the spool or bobbin having a separable two-part hollow barrel, of
45 a support contained within and held between the adjacent ends of the parts of the said barrel below the center of gravity of the spool.

Figure 1 shows in vertical section a spool embodying this invention, and Fig. 2 an end
50 view of the spool shown in Fig. 1.

The barrel of the spool is herein shown as composed of two parts *a b*, joined together at a point substantially below the center of gravity, and made hollow for lightness. A disk *c* is placed within to support the hollow
55 barrel, the said disk being preferably non-metallic—as leather-board, for instance—and being held between the adjacent ends of the two parts of the barrel. The barrel has at each end a small circular hub or projection 60 *d*, and a head *e* of fibrous material, as leather-board, is secured to each end of the barrel, encircling the said hubs, any cementitious material or independent fastening being employed for the purpose. Each head *e* is provided with a circumferential flange *e'*, and
65 when said heads are in position on the barrel the flanges thereof extend outward from the barrel to thereby present flaring ends for the spool. A block of wood or other suitable material *f* is fitted into the cavity or recess
70 formed by the flanges of the head and secured in place by cement or by any other suitable fastening. The blocks *f* are of sufficient thickness to present smooth flat-surfaced ends, with the hubs *d* and flanges *e'*. A metallic
75 tube *g* is fitted into the barrel, axially extending from end to end, and a metallic bushing *i*, having an overturned flange *i'* at its outer end, is fitted into each end of the metallic
80 tube *g*, so that the spindle upon which the spool is placed will contact with the bushings.

I may, if desired, omit the metallic tube, depending solely upon the disk *c* to support
85 the barrel; or I may omit the support *c* and depend solely upon the metallic tube or bushings.

The head *e*, made of leather-board, as herein described, may be cut out and pressed into
90 suitable shape by dies, thereby producing a very cheap, light, and durable head, and one which will not split by accidentally dropping it.

When pins, as 2, are employed as fastenings, they may, if desired, be clinched at the
95 interior of the barrel, to be thereby held in place.

It is obvious that the barrel may be separated at any other point desired, and, furthermore, some of the features herein de- 100

scribed are equally as efficient whether the barrel is separable or not.

By the employment of a disk in lieu of a metallic ring heretofore used for this purpose
5 the barrel cannot be as easily crushed.

I claim—

1. The combination, with the barrel, of the spool reduced at its ends to leave circular projections, of an independent head made of
10 fibrous material, as leather-board, encircling each of the said projections and rigidly attached to the barrel, the circumference of the heads being turned outward from the barrel to form flaring ends therefor, substantially as
15 described.

2. The combination, with the barrel of the spool having circular hubs on the ends thereof, of heads made of fibrous material, as leather-board, and having each a curved circumferential flange extending outwardly from
20 the barrel of the spool, and a block filling the recess formed between the flange of each of the heads and the corresponding hub to present flat-surfaced ends, substantially as described.
25

3. The combination, with the hollow separable barrel of the spool having reduced ends

to form shoulders, of heads, each having as an integral part thereof a circumferential outwardly-extended upturned flange, and independent fastenings, as pins, extended through
30 the said head and shouldered portions of the barrel, substantially as described.

4. The combination, with the two-part separable hollow barrel of the spool, of a disk
35 contained within the barrel and held rigidly between the adjacent ends of its parts as a support for it and independent heads or ends, substantially as described.

5. The spool or bobbin having a separable
40 two-part hollow barrel and a support contained within and held between the adjacent ends of the parts of said barrel below the center of gravity of the spool, substantially as described.
45

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH NOYES KELSEA.

Witnesses:

J. C. CAMPBELL,

M. E. CAMPBELL.