Nov. 18, 1952 G. O. A. KELLOGG 2,618,442

SUTURE HOLDING SPOOL

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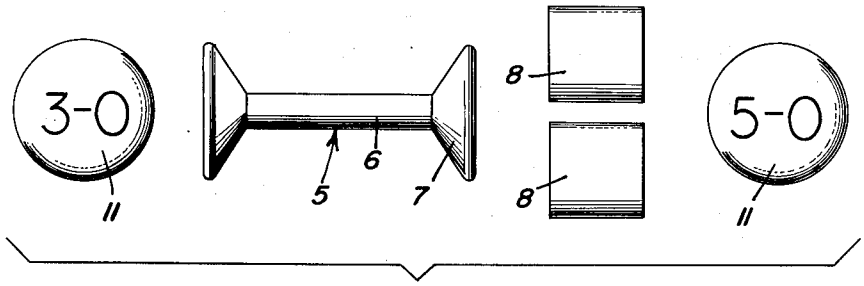


Fig. 1.

Fig. 2.

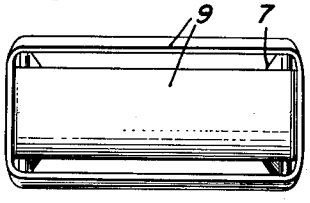


Fig. 4.

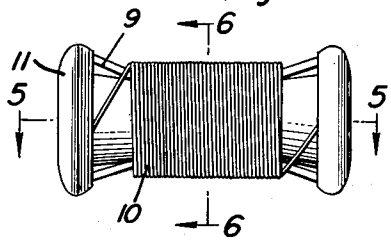


Fig. 3.

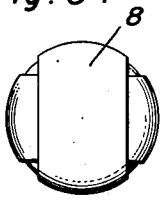
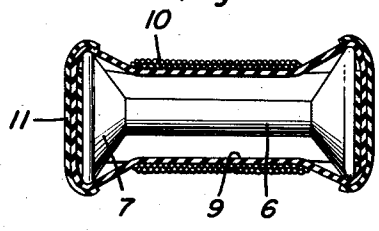


Fig. 5.



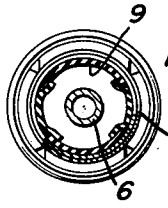


Fig. 6.

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SUTURE HOLDING SPOOL

George O. A. Kellogg, Nampa, Idaho

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4 Claims. (Cl. 242—72)

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The present invention relates to new and useful improvements in spools for holding sutures or ligatures and more particularly to a spool for use with cotton thread sutures or ligatures used in certain types of surgery.

An important object of the invention is to provide a spool of this character having a high degree of expansion and contraction to prevent damage to the individual fibers of sutures or ligatures made of cotton thread due to shrinkage when subjected to heat and moisture, such as during sterilization when preparing the suture for surgery, and thus avoid weakening thereof.

A further object is to construct a suture spool suitable for holding a cotton thread suture or ligature during and after sterilization to permit free contraction thereof.

Another object is to provide a device of this character of simple and practical construction, which is efficient and reliable in use, relatively inexpensive to manufacture and otherwise well adapted for the purpose for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a group elevational view of the parts of the invention before assembly,

Figure 2 is a side elevational view showing the elastic bands positioned on the spool,

Figure 3 is an end elevational view of Figure 2,

Figure 4 is a side elevational view of the assembled spool with a suture wound thereon,

Figure 5 is a longitudinal sectional view taken on a line 5—5 of Figure 4 and,

Figure 6 is a transverse sectional view taken on a line 6—6 of Figure 4.

Referring now to the drawing in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of my invention, the numeral 5 designates a spool preferably constructed of stainless steel or other suitable material for withstanding frequent sterilizing and formed with the usual cylinder or hub 6 and flanges 7 at each end.

A pair of elastic bands 8 are stretched longitudinally over the ends of the spool in crossed relation to provide four elastic strips 9 positioned at 90° with respect to each other and extending longitudinally of the spool to provide an outer expanding and contracting hub, and on which a suture or ligature 10 of cotton thread is tightly wound.

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The ends of the suture or ligature 10 are secured under the edges of a pair of rubber or other suitable caps 11 secured on the flanges 7 by a snapping action and also covering the crossed bands 8 at the ends of the spool to hold the bands on the flanges. The exposed surfaces of the caps 11 may be suitably marked to indicate the size on character of the suture carried by the spool.

When sterilizing the wound suture for use in surgery the fibers of the cotton thread shrink and the contraction of the outer hub formed of the elastic strips 9 permits this shrinkage without subjecting the fibers to strain and thus prevents weakening of the suture by damage to the individual fibers.

When removing the suture, one end is cut to free the same from its cap 11 and the suture may then be unwound.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A spool comprising a rigid internal hub having terminal end portions, and an external hub composed of one or more endless elastic bands stretched parallel to the longitudinal axis of the spool and transversely over the ends of the spool.

2. A spool comprising a rigid internal hub, an external hub composed of one or more endless yieldable bands extending longitudinally of the spool and across the ends thereof, and caps covering the ends of the spool and holding the bands thereon.

3. A spool comprising a rigid internal hub, an external hub composed of one or more yieldable endless bands extending longitudinally of the spool and across the ends thereof, and caps covering the ends of the spool and enclosing the portion of the bands crossing said ends, said external hub being adapted for winding a thread thereon and with the ends of the thread clamped under the respective caps.

4. A spool comprising a rigid internal hub having a flange at each end, a plurality of elastic bands stretched longitudinally of the hub and

across the flanges, and elastic caps positioned on the flanges and covering the ends of the bands, said elastic bands being adapted for winding a thread thereon and with the ends of the thread clamped under the respective caps.

GEORGE O. A. KELLOGG.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,862,405	Johnson	June 7, 1932
1,966,685	Rowe	July 17, 1934
2,021,048	Cowan, Jr.	Nov. 12, 1935
2,154,343	McDermott	Apr. 11, 1939
2,233,137	Lewis	Feb. 25, 1941
2,439,903	O'Connell	Apr. 20, 1948

FOREIGN PATENTS

Number	Country	Date
329,535	Great Britain	May 22, 1930
380,017	Great Britain	Sept. 8, 1932