

(No Model.)

J. E. LEE.
SURGICAL LIGATURE RECEPTACLE.

No. 491,315.

Patented Feb. 7, 1893.

FIG. 1.

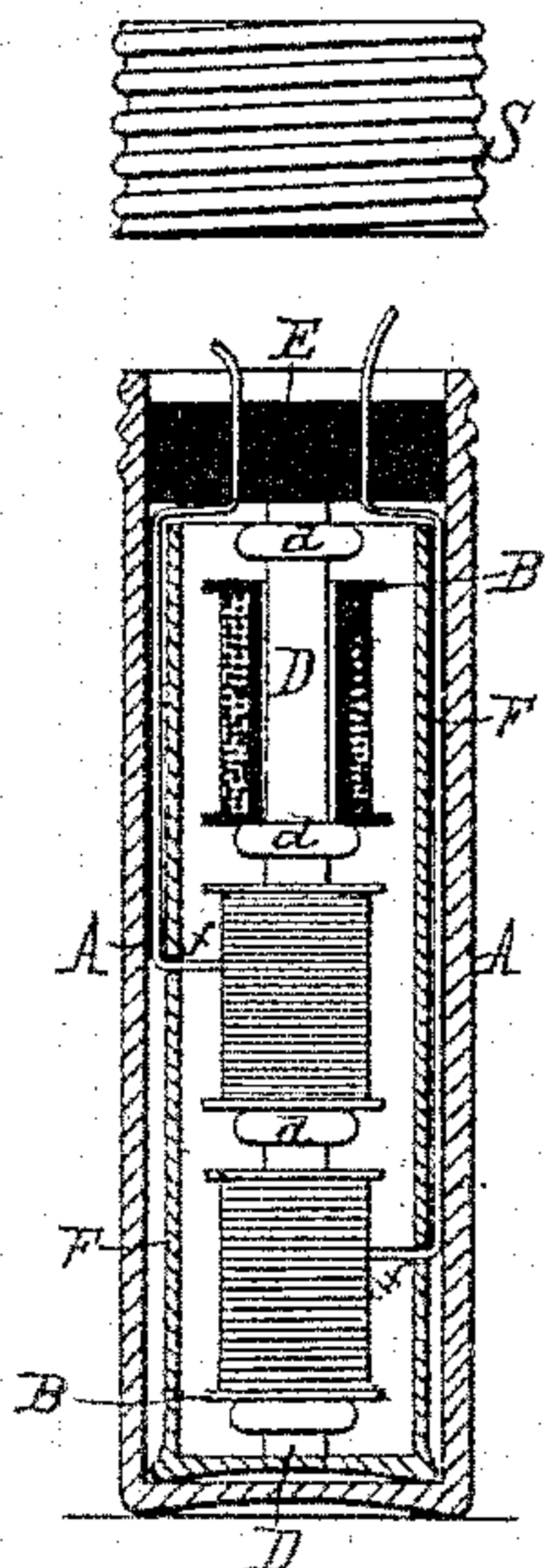


FIG. 2.

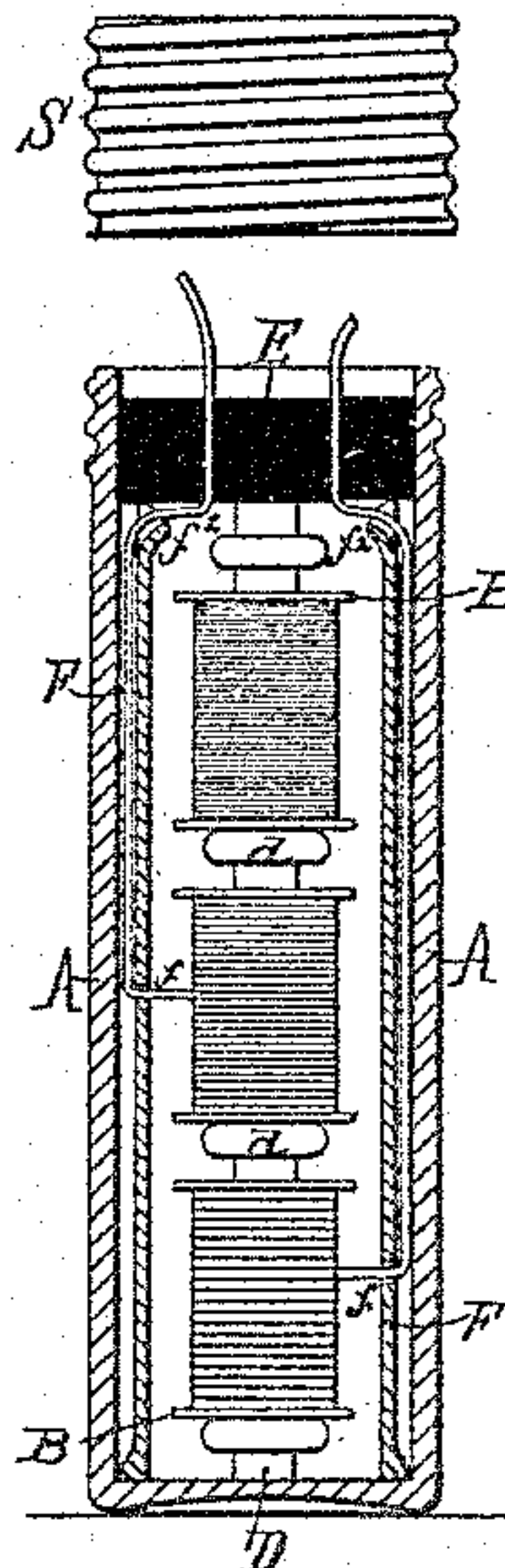


FIG. 3.

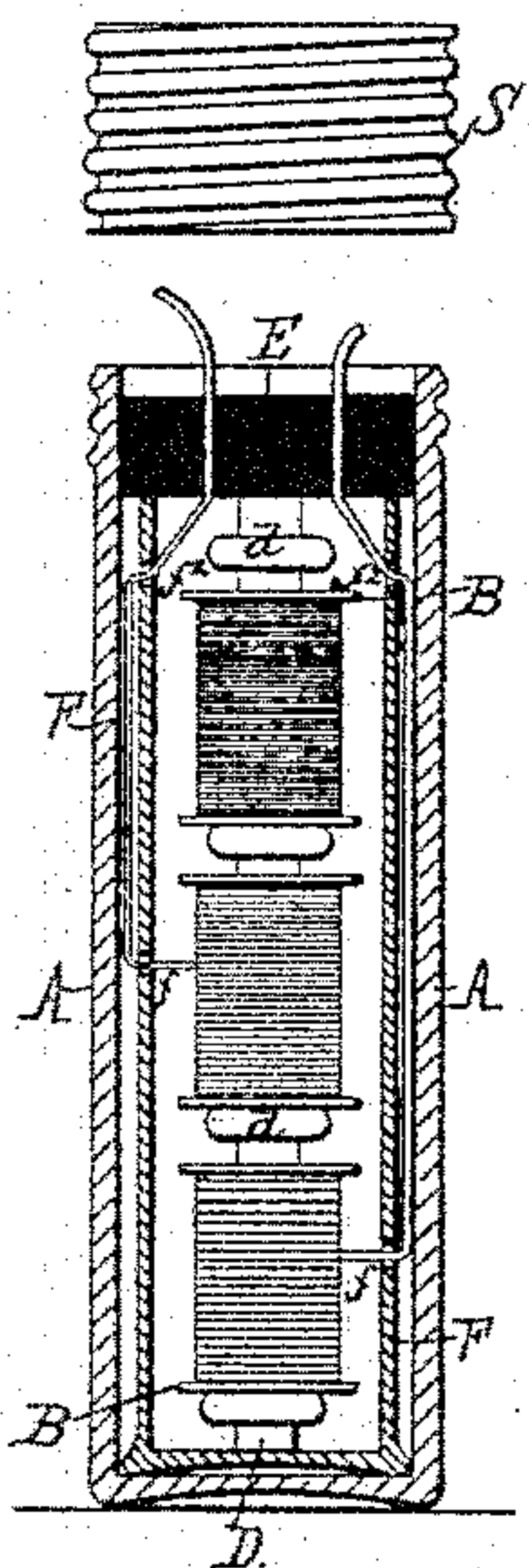
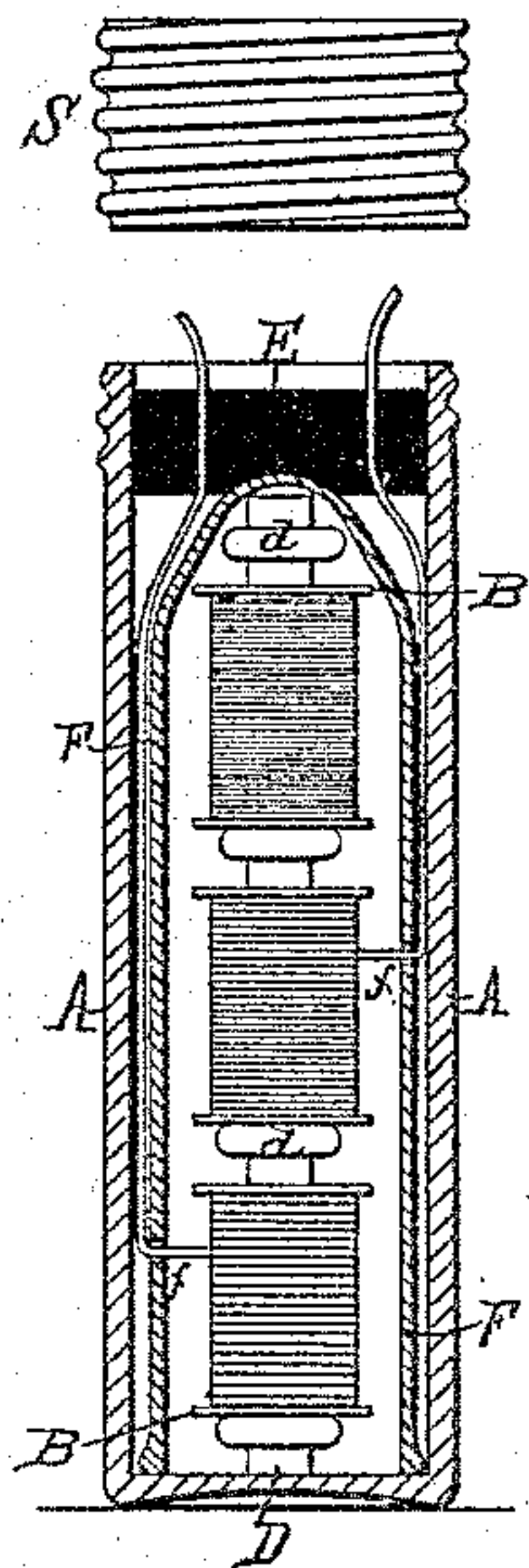


FIG. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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SURGICAL-LIGATURE RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 491,315, dated February 7, 1893.

Application filed September 28, 1892. Serial No. 447,160. (No model.)

To all whom it may concern:

Be it known that I, JOHN ELLWOOD LEE, a citizen of the United States, and a resident of Conshohocken, Montgomery county, Pennsylvania, have invented an Improvement in Packages of Surgeons' Silk or Catgut, of which the following is a specification.

My present invention is mainly designed as an improvement upon the package of surgeon's silk or catgut, for which I have obtained Letters Patent of the United States No. 385,937, dated July 10, 1888, and one of the principal objects of my invention is to reduce the size of a package containing a given amount of silk or catgut, while at the same time retaining the advantages of the patented invention.

In the accompanying drawings, Figure 1 is a vertical section of my improved ligature package in its simplest form; Fig. 2 is a view partly in section, of a modification; Fig. 3 is a view of another modification; and Fig. 4 is a view of a construction of package embodying my invention in the form in which I prefer to make it.

The silk or catgut (which I will hereinafter refer to as "thread") is wound on spools B preferably of glass. These spools are adapted to be placed in the bottle endwise or with their axes in line with the longitudinal axis of the bottle or other receptacle A, containing antiseptic fluid. The several spools are mounted upon or carried by a longitudinal spindle D which is provided with flanges, shoulders or enlargements *d* between the adjoining ends of the spools, so that the latter are separated and out of frictional contact with each other. Consequently the rotation of one spool in drawing off the thread will not tend to turn the next, as would be the case if the spool ends were in contact with each other. I prefer also to form similar flanges, shoulders or enlargements upon the carrying stem above the uppermost and below the lowest spools in order to keep these end spools out of contact with the top and bottom of the container. The mouth of the bottle is closed by means of a stopper E of rubber or other suitable material, through the body of which the ends of the threads are passed with a close fit, as described in my above mentioned patent.

In order to facilitate the drawing off of the threads without danger of the ends becoming entangled, and without causing the spools to bind, I combine with the spools and the bottle a guide arranged between the spools and the walls of the bottle, and preferably consisting of a tube F having eyelet holes *f* immediately opposite the several spools at about the centers thereof. The thread from each spool is passed through the corresponding hole and carried outside the tube to be then passed through the stopper of the bottle. The lower end of this tubular guide may be open or closed but is made somewhat flaring or enlarged in its outer diameter, so that it will fit the bottom of the bottle A, but leave a free passage for the threads passing upward from the eyelet holes in the tubular guide, as illustrated in the drawings. This tubular guide may be somewhat shorter than the space between the under side of the stopper E and the bottom of the bottle, and the ends of the silk or catgut may be simply passed over the top of the tubular guide before passing through the stopper, as shown in Fig. 1. In order however to prevent possible binding of the silk or catgut by pulling on one of the threads, I may provide notches *f'* in the upper edge of the tubular guide for the free passage of the threads of silk or catgut, as shown in Fig. 2, or the same end may be accomplished by forming a second set of eyelet holes *f*² near the top of the tubular guide for the passage of the threads, as illustrated in Fig. 3. In these constructions shown in Figs. 2 and 3, the stopper E is intended to fit closely down upon the upper end of the tubular guide, so that there will be no longitudinal movement of the latter. I however prefer the construction shown in Fig. 4, in which the tubular guide is closed, or partially closed, at the top and is tapered or otherwise diminished toward its extreme upper end, so that the stopper E can bear upon this diminished upper end and leave around it plenty of room for the passage of the threads through the stopper at points around the ends of the tubular guide. The lower end of the tubular guide in this case is preferably open, as shown.

It is preferred to form the tubular guide and also the stem for the spools of glass, but they may if desired be made of other material

such as hard rubber or metal. If the stem for the spools is made of glass the flanges, enlargements or shoulders on the stem may be formed as the spools are slipped into place one after the other, so that when the spools are arranged on the stem they will be always in place, and when catgut or silk is used up they can if desired be re-wound with fresh catgut or silk.

10 In the drawings I have shown each of the packages as containing three spools, but it will be readily understood that they can be made with more or fewer as desired.

Each ligature package, as above described, 15 is preferably provided with an inclosing cap S as described in my above mentioned patent.

I claim as my invention:—

1. A package of surgeon's silk or catgut, consisting of a receptacle, having spools of 20 the thread and a longitudinal carrying spindle provided with flanges or projections between the adjoining ends of the spools, as and for the purpose set forth.

2. A package of surgeon's silk or catgut 25 consisting of a receptacle, containing one or more spools of the thread with a guide having an eyelet hole opposite each spool for the thread thereof, substantially as described.

3. A package of surgeon's silk or catgut 30 consisting of a receptacle having one or more

spools lengthwise of the receptacle, and a tubular guide between the spools and the receptacle, such tubular guide being provided with an eyelet hole opposite each spool, substantially as set forth.

4. A package of surgeon's silk or catgut, 35 consisting of a receptacle having one or more spools of the thread with a tubular guide around the spools and provided with an eyelet opposite each spool, said guide having an 40 enlarged or flared end to fit one end of the receptacle and leave a space for the passage of the thread between the said guide and the inner wall of the receptacle, substantially as set forth.

5. A package of surgeon's silk or catgut, 45 consisting of a receptacle having one or more spools of the thread and a stopper through which the thread is passed with a close fit, and a tubular guide provided with an eyelet 50 for each thread and with a reduced end in contact with the inner face of the stopper, all substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of 55 two subscribing witnesses.

J. ELLWOOD LEE.

Witnesses:

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A. J. PENNINGTON.