Nov. 13, 1951 G. E. CARAWAY 2,574,728

SURGICAL REEL DEVICE

Filed Oct. 3, 1949

Fig. 1.

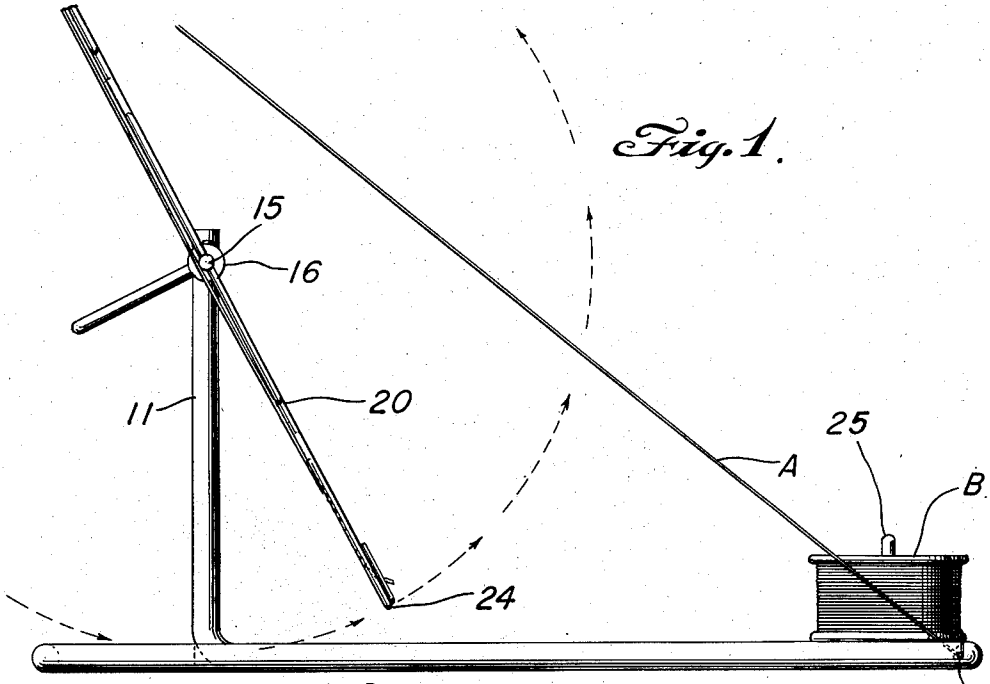


Fig. 2

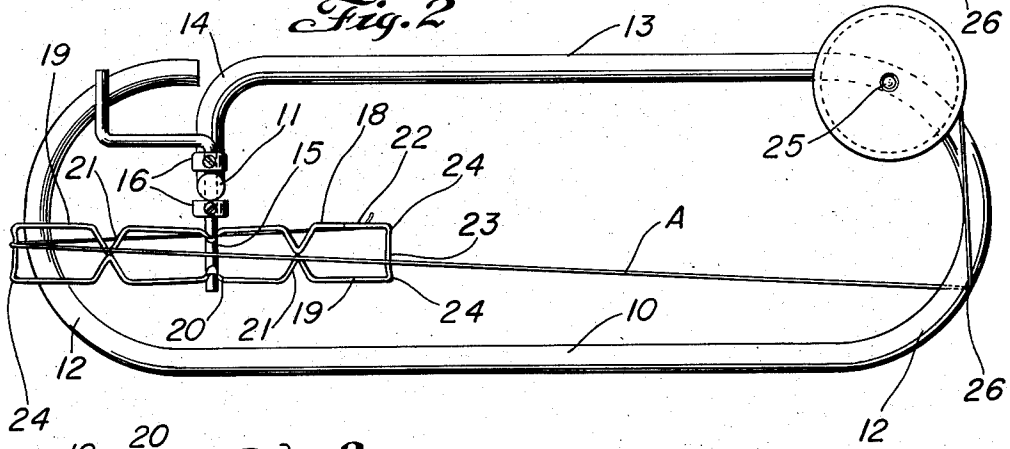
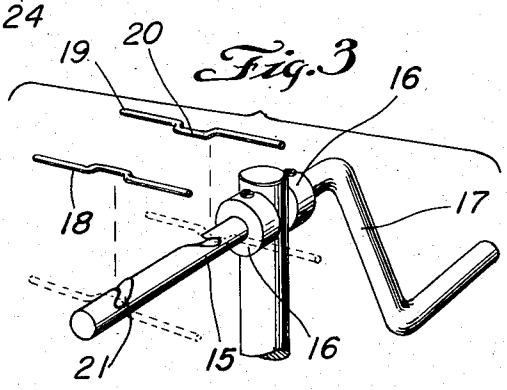


Fig. 3



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Patented Nov. 13, 1951

2,574,728

UNITED STATES PATENT OFFICE

2,574,728

SURGICAL REEL DEVICE

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Application October 3, 1949, Serial No. 119,354

4 Claims. (Cl. 242—104)

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This invention relates to new and useful improvements in surgical reel devices.

It is customary in preparing suture material for surgical purposes to wind the thread on some support, such as a piece of cardboard or stick and sterilize it in an autoclave or other sterilizing device. This is a haphazard and unsatisfactory method of supporting the suture.

One object of the invention is to provide an improved reel device having means for supporting a spool of suture thread and means for feeding the thread to a reel mounted to be revolved and having a removable frame upon which the thread is wound.

Another object of the invention is to provide a reel device of the character described which includes an elongate reel frame having means at its ends for maintaining the windings and formed with a resilient medial portion adapted to removably engage the winding shaft of the reel.

A construction designed to carry out the invention will be hereinafter described together with other features of the invention.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawing, wherein an example of the invention is shown, and wherein:

Fig. 1 is an elevation of a surgical reel device constructed in accordance with the invention,

Fig. 2 is a plan view of the same, and

Fig. 3 is an exploded view, in perspective, showing the medial portion of the reel frame disconnected (in full lines) from the reel shaft and connected to shaft in dotted lines.

In the drawings, the numeral 10 designates a reel base having an upright reel post 11. The base and post are made from a single piece of large gauge wire bent upon itself. The base 10 is formed by bending the wire into a general rectangular shape having rounded ends 12 in the same horizontal plane. One end of the wire terminates at one side of left-hand (Fig. 2) end. The side member 13 is bent inwardly at 14, in the same plane, adjacent the terminating end of the left-hand end 12 and then bent upwardly at substantially right angles to form the post 11.

A shaft 15 is journaled in the upper end of the post, transversely of the base and rotatably confined by a pair of collars 16, fastened thereon on each side of said post. The outer end of the shaft is bent to form a crank handle 17; while the inner end of said shaft overhangs the inner portion of the base, at the left-hand end (Fig. 2). The handle is employed to rotate the shaft 15.

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An elongate, substantially rectangular frame 18 is removably fastened, at its center or medial portion, to the shaft 15 and forms with said shaft, a revolving reel. This frame is formed of relatively light gauge wire and its side members 19 have opposed, inwardly directed offsets or crimps 20 at the central or medial portion of said frame. The frame being formed of resilient wire, its side members are readily displaceable. The shaft is formed with oppositely inclined notches 21 and the crimps 20 are sprung thereinto and may be removed therefrom, simply by pressing the side members 19 toward each other.

The reel frame is preferably made of a single piece spring wire bent upon itself with its ends overlapping at one end of said frame as is indicated at 22. The ends or cross members 23 of the frame have outwardly directed offsets or humps 24 at one side of the frame to form stops to prevent the windings of the suture thread A from slipping off the frame. The overlapping ends 22 afford a catch for holding one end of the thread when it is slipped therebetween.

The suture thread A is wound upon a spool B which is mounted on a spindle 25 extending upwardly at the intersection of the right-hand end (Figs. 1 and 2) of the base and the member 13. The thread from the spool is passed through an eye 26 in the right-hand end of the base and thence to the reel frame 18. The angular bend of the thread at the eye creates a more or less frictional contact which tends to place the thread, passing to the reel, under a sufficient tension to prevent appreciable slack, when said thread is being wound upon the reel.

When a sufficient number of windings have been made upon the reel frame, the thread is cut off and said frame is removed and placed in a suitable sterilizer. When the frame is removed from the sterilizer, the windings may be cut to provide sutures of suitable lengths. The device makes a convenient and effective means of winding and supporting the wound thread. The device is compact and readily used. The reel frame when removed for sterilizing provides a compact package of suture threads.

The foregoing description of the invention is explanatory thereof and various changes in the size, shape and materials, as well as in the details of the illustrated construction may be made, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:

1. A surgical reel device including, an elongate

base, an upright post at one end of the base, a shaft mounted to rotate in said post, a crank handle on said shaft, said shaft having opposite inclined notches, and an elongate reel frame having resilient crimps at its medial portion engaging in said notches.

2. A surgical reel device including, a base, a rotatable shaft mounted on said base, and a reel frame removably attached at its medial portion to said shaft, the shaft having notches cut in its periphery at an angle with respect to its longitudinal axis, the notches being inclined toward one another, and the reel being adapted to be compressed for engagement within the notches.

3. A surgical reel device including, a base, a rotatable shaft mounted on said base, and an elongate reel frame removably attached at its medial portion to said shaft, said reel frame having at least a central portion of a resilient nature, the shaft having oppositely inclined notches cut in its periphery adapted to receive the resilient medial portion of the reel.

4. A surgical reel device as set forth in claim 3 wherein the rotatable shaft is supported at one end only whereby the opposite end of the shaft is free and unencumbered.

GORDON E. CARAWAY.

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