Dec. 28, 1948. I. KALLENBACH 2,457,379

INCISION NEEDLE

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Fig. 1.

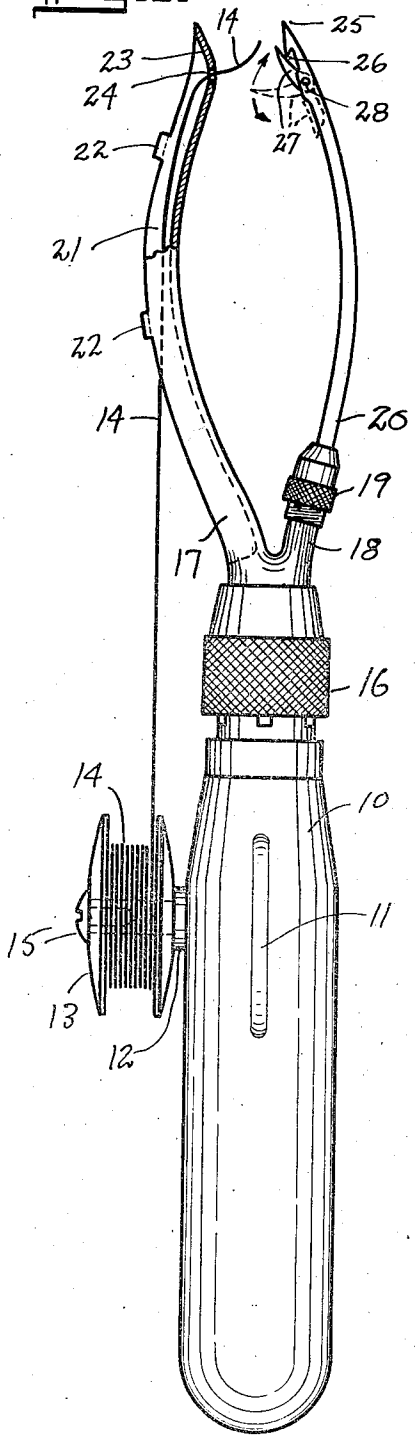
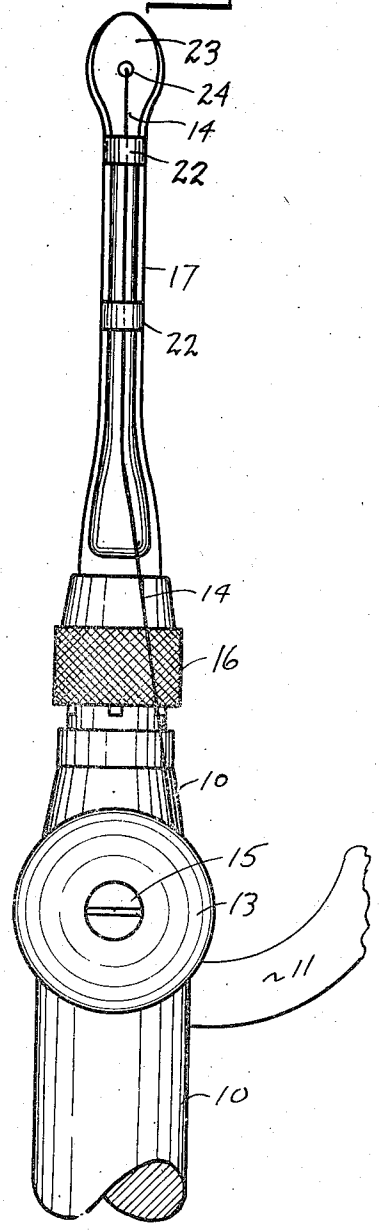


Fig. 2.



Irene Kallenbach.
INVENTOR.

BY W. B. Harpman
ATTORNEY.

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INCISION NEEDLE

Irene Kallenbach, Dayton, Ohio, assignor to Vern J. Kallenbach, Erie, Pa.

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3 Claims. (Cl. 128—340)

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This invention relates to an instrument such as used by the medical profession and more particularly to an incision needle for use in applying a suture to an incision or wound.

The principal object of the invention is the provision of an incision needle for drawing a suture across an incision to be closed.

A further object of the invention is the provision of an incision needle incorporating means for conveniently dispensing a section of material to be employed as a suture.

A still further object of the invention is the provision of an incision needle, the various component parts of which are disengageably assembled to form a suitable surgical instrument.

A still further object of the invention is the provision of an incision needle for affixing a suture in an incision and provided with a barbed latch to expedite the handling of the suture employed.

The incision needle shown and described herein has been devised to form a surgical instrument particularly adapted for simply and efficiently applying suture as used in the medical profession in closing incisions and wounds in human anatomy. The instrument consists of a two part structure, one portion of which comprises a barbed latched needle particularly adapted for being positioned through the opposing edges of an incision for example, and adapted to engage and temporarily retain a suture to be drawn through the said opposing edges of the incision. The needle also includes a suture dispensing device including a guide for dispensing the suture in the area of employment, that is, adjacent the barbed latch needle used in drawing the suture through the incision.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a side elevation of the incision needle with parts broken away and parts in cross section.

Figure 2 is a top plan view of the incision needle with parts broken away and parts in cross section.

By referring to the drawings and Figures 1 and 2 in particular it will be seen that the instrument

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consists of an incision needle incorporating a handle portion 10 having a secondary handle 11 positioned at right angles with respect thereto, and that the handle 10 is provided with a mounting 12 for a reel 13 upon which a continuous length of suture material 14 is conveniently carried. The reel 13 is removably positioned on the mounting 12 by means of a readily disengageable screw 15. The uppermost end of the handle 10 is provided with a chuck assembly 16 which serves to position a suture guide member 17 which in turn is provided with an offset projection 18 which carries a chuck 19 which in turn mounts an incision needle 20. The suture guide member 17 is curved throughout its length and the edges thereof are out-turned to form a channel 21 for the reception of the suture 14. A plurality of cross members 22 serve to retain the suture member in the outwardly facing channel 21 of the suture guide member 17. The uppermost or tip end of the suture guide member 17 is dished out in a modified spoon shape, as indicated in the drawings by the numeral 23, and is provided with an orifice 24 through which the suture is passed so as to bring it into the area of the adjacently positioned incision needle 20 of the instrument.

By referring now to the incision needle 20 it will be observed that it is formed in an outward curve and that its uppermost or outermost end is provided with a barbed tip 25, a barb 26 and a latch 27, the latch 27 being pivoted to the needle proper by means of a pivot 28 and is located in a slot formed in the end section of the incision needle 20 so as to be movable therein, as indicated by the dotted lines in Figure 1. It will be observed that the latch 27 is capable of approximately 180 degrees rotation about the pivot 28 to enable it to be used in latched position as shown in solid lines in Figure 1, as in pulling a section of suture through the opposing edges of an incision and also is capable of being moved into complete retracted position within the slot in the end of the needle as indicated by the dotted lines in opposite relation to the full line elevation. The incision needle portion 20 of the instrument is removably affixed to the remainder of the instrument by means of the chuck 19 which permits ready interchange of the actual flesh engaging portions of the instrument, and the suture guide portion 17 is also disengageably affixed to the handle portion 10 of the instrument by means of the chuck assembly 16. The incision needle as employed by a surgeon as, for example, in closing an incision, forms a convenient means for supplying the suture and maintaining it in proper

workable position and at the same time providing a convenient and simply employed mechanism for moving the suture through the opposing edges of the incision to be joined.

It will be obvious to those skilled in the art that several alternate methods of applying the suture with the incision needle may be practiced, and one such example follows. A section of suture 14 of length sufficient to close the incision is moved outwardly through the orifice 24 of the suture guide member 17 and the incision needle portion 20 of the instrument is passed through the opposing edges of the incision with the latch 27 in retracted position. When the tip of the needle emerges from the opposite side of the incision from whence it is inserted, the suture is grasped between the tip 25 of the needle 20 and the latch 27 and is then drawn back through thereby forming a stitch through the adjacent edges of the incision. This operation is repeated until sufficient stitches have been placed to suitably hold the incision in desired relation for subsequent healing, it being observed that the formation and construction of the suture guide 17 of the instrument and the incision needle 20 thereof greatly facilitate the application of the suture to the incision area as well as the passing of the suture through the edges of the incision in forming the completed suture.

The instrument is provided with the handle 10 and the secondary handle 11 positioned at right angles thereto and which secondary handle 11 is also curved so that it may be conveniently held by the surgeon for use. It will be obvious to those skilled in the art that the use of the instrument shown and described herein greatly facilitates the applying of a suture to an incision.

Having thus described my invention, what I claim is:

1. A combination surgical instrument consisting of a handle member having a chuck formed at one end thereof and a suture guide member having an offset projection thereon removably affixed to said handle by said chuck, the said suture guide consisting of a curved channel section having the outermost end thereof of flattened spoon shape and with an orifice therethrough, means on said handle for supplying a section of suture to the said guide and a chuck on said offset projection of said suture guide member for removably mounting an incision needle, the said incision needle including a barbed latch to enable it to be employed in pulling a section of suture through the opposing edges of an incision to be joined.

2. A combination surgical instrument for supplying and applying a suture and consisting of a suture supplying and guide member, the said suture supplying and guide member comprising an outwardly bowed, transversely curved member terminating in a flattened spoon shaped section having an orifice centrally disposed therein, a chuck affixed to the said suture supplying and guide member near its innermost end and an incision needle positioned in spaced fixed relation with respect to the said suture supplying and guide member thereby, the outermost ends of the said suture supplying and guide member and the said incision needle being adjacently disposed, means on the said instrument for supplying a section of suture through the said guide member to the area of the said needle and for delivering the same through the said orifice, and means on the said needle for holding said suture to permit it to be drawn through an incision as in closing the same.

3. A combination surgical instrument for supplying and applying a suture and consisting of a suture supplying and guide member, the said suture supplying and guide member comprising and outwardly bowed, transversely curved member terminating in a flattened spoon shaped end section having an orifice centrally disposed therein, a chuck affixed to the said suture supplying and guide member near its innermost end and an incision needle positioned in spaced fixed relation with respect to the said suture supplying and guide member thereby, the outermost ends of the said suture supplying and guide member and the said incision needle being adjacently disposed, a reel on the instrument for continuously supplying a section of suture through the said guide member to the area of the said needle and for delivering the same through the said orifice, and means on the said needle for holding said suture to permit it to be drawn through an incision as in closing the same.

IRENE KALLENBACH.

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