

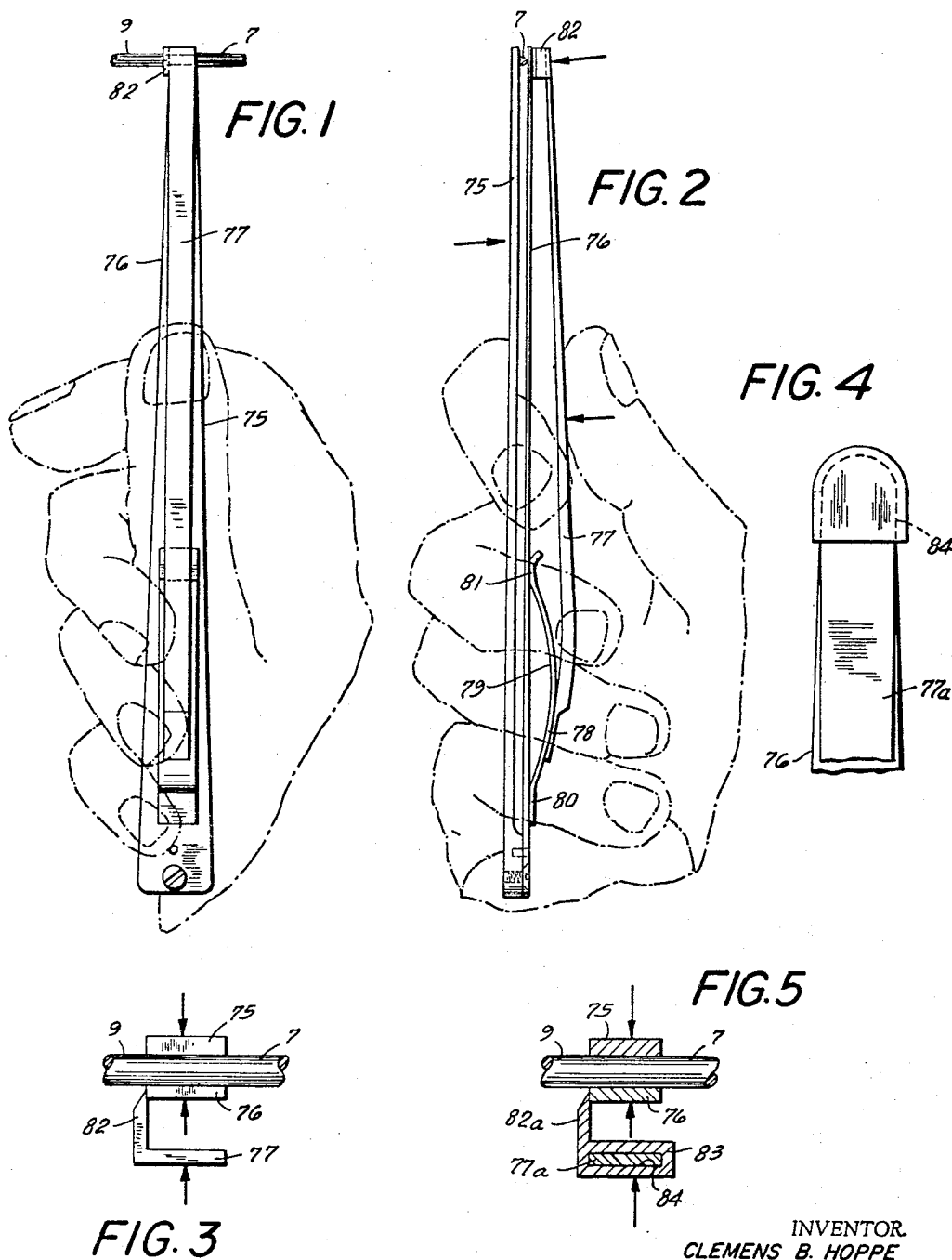
Jan. 23, 1968

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3,364,573

SURGICAL SUTURE EXTRACTOR

Original Filed Oct. 27, 1964



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SURGICAL SUTURE EXTRACTOR

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Original application Oct. 27, 1964, Ser. No. 406,861, now Patent No. 3,328,876, dated July 4, 1967. Divided and this application Dec. 21, 1966, Ser. No. 623,160
3 Claims. (Cl. 30—124)

This application is a division of my application Ser. No. 406,861, now Patent No. 3,328,876, filed Oct. 27, 1964.

This invention relates to instruments for removing sutures and more particularly to a device to be used by surgeons to facilitate the lifting of sutures after they have been cut. More especially the invention relates to an improved device for severing a suture and substantially simultaneously gripping the cut-off thread or stitch so that it can be removed in a substantially single motion of the surgeon's hand.

In accordance with the invention the instrument comprises a slender elongated device in the form of tweezers, having means at its outer or operating end for engaging and holding a suture, together with a knife arranged to be slidable adjacent the operating end of the device, and means near the grasping portion of the device operable by the hand including one or more of the fingers for causing the knife to move and sever the suture close to the point where it is engaged and held at the outer end of the device.

The invention includes a number of forms of embodiment and it will be better understood from a consideration of the accompanying drawings showing these various embodiments and also from the detailed description following. In these drawings:

FIG. 1 is a side view of a device embodying the invention;

FIG. 2 is a side view looking from the left of FIG. 1;

FIG. 3 is an end view from the top of FIG. 1 and

FIGS. 4 and 5 illustrate a modified detail of the device wherein the knife is arranged to be disposable, FIG. 4 showing in side view the upper end portion of the device, and FIG. 5 being a view in transverse section.

Referring to FIGS. 1-3 the suture remover comprises a more or less rigid tweezer blade 75 and a flexible blade 76, the two being secured together at their butt ends by means of the screw and dowel pin arrangement illustrated. The outer end portions of these two members form the jaws for grasping the suture. A third blade-like member 77 overlies blade member 76, and is somewhat shorter than the other two blade members and also somewhat stiffer. Its lower end is welded at 78 to a curved plate spring 79, the lower end 80 of which is welded to the adjacent tweezer blade 76. The upper end portion 81 of spring 79 engages and slides somewhat on the outer surface of blade 76. Member 77 is somewhat narrower than the other two blades but is stiff. The use of plate

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spring 79 for supporting member 77 is advantageous but other means for resiliently supporting member 77 may be employed. A knife 82 projects from the left side of member 77 near its end and in position to engage the suture.

In operation, this device is grasped by the hand as shown in FIGS. 1 and 2 and the jaws are closed upon the suture 9 by a squeezing pressure between the fingers and palm and transmitted from member 77 to blade 76 through the spring 79 which overcomes the resiliency of blade 76. Then additional pressure is applied by the thumb at a central position between the ends of member 77 which causes knife 82 to sever the suture so that the portion 7 thereof can be removed.

Knife 82 is shown in FIGS. 1-3 as being integral with the member 77. In FIGS. 4 and 5 a construction is shown wherein a disposable knife may be used. This knife which is indicated at 82a has a supporting member or holder 83 having a lengthwise recess 84 which is constructed to telescope over the outer end portion of member 77a and make a friction fit therewith so as to be retained securely in position. As indicated in FIG. 4 the outer end of member 77a may be rounded to a semi-circular form, and the holder 83 and its recess similarly formed.

I claim:

1. An instrument for removing sutures comprising a tweezer-like device adapted to be grasped by the hand having two cooperating gripping blades resiliently spaced apart and operable to grip a suture between their outer end portions, a third blade member mounted parallel to the gripping blades, a knife movable adjacent one side of the gripping blades to sever the suture, said knife being mounted adjacent the end on one side of the third blade member, and means operable by manual squeezing pressure for actuating said knife.

2. An instrument for removing sutures as set forth in claim 1 wherein the means operable by squeezing pressure comprises said third blade member and a plate spring interconnecting the butt end of such member with the butt end portion of one of the tweezer blades, the outer end portion of the plate spring slidably engaging said tweezer blade.

3. An instrument for removing sutures as set forth in claim 1 in which a disposable knife is mounted on a recessed holder arranged to telescope over the end portion of the third blade member and is frictionally held in position thereon.

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