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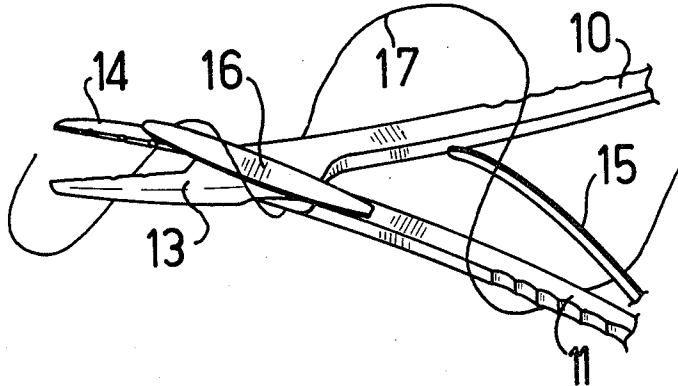
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[54] **SEWING TISSUE INSTRUMENTS OR THE LIKE**
1 Claim, 4 Drawing Figs.

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 81/416
[51] **Int. Cl.**..... **A61b 17/04,**
 B25b 7/06
[50] **Field of Search**..... **30/134,**
 135, 266; 81/415, 416, 417, 5.1; 128/321, 322,
 323, 324, 340, 346, 326, 334

ABSTRACT: A forceps or like instrument having a covering shield attached to each member or leg at its pivoted end so as to cover any opening between engaging surfaces or projection at or about where each member or leg pivots, so that thread or the like employed with the forceps will be prevented from dropping into an opening between the surfaces or about the projections on the forceps.



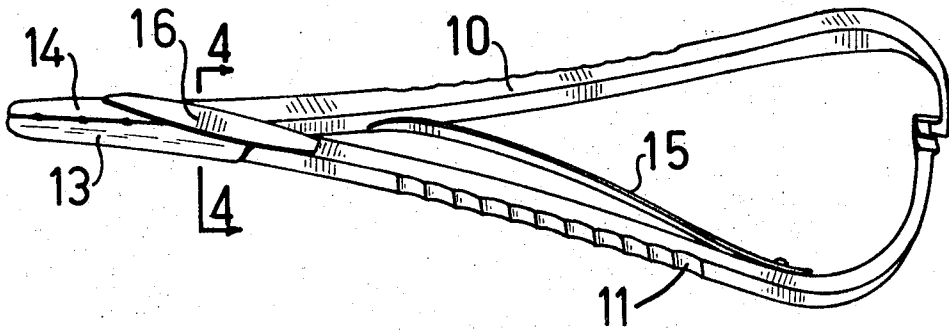


FIG. 1.

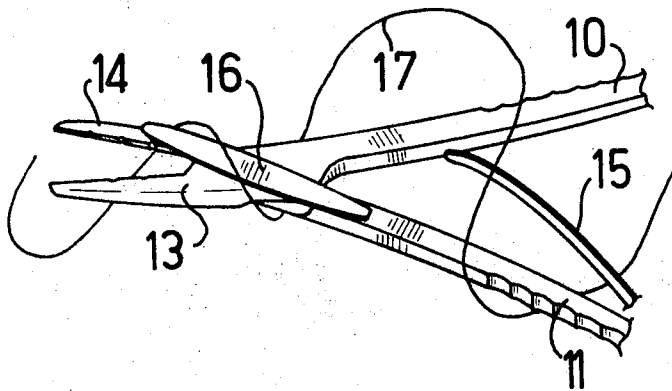


FIG. 2.

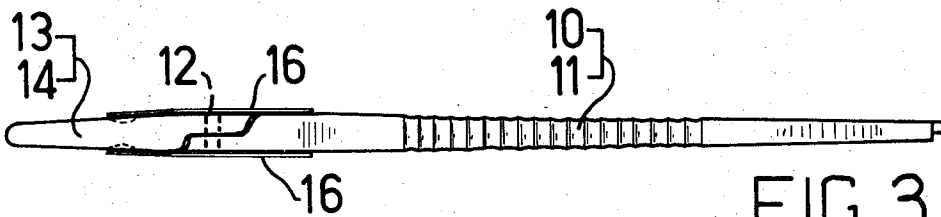


FIG. 3.

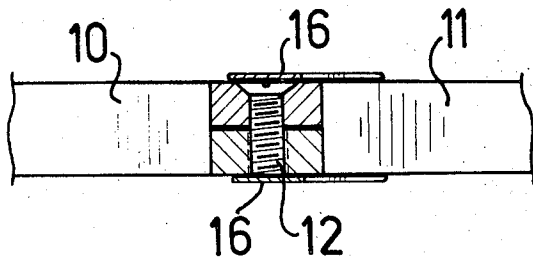


FIG. 4.

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SEWING TISSUE INSTRUMENTS OR THE LIKE

This invention relates to improvements in sewing tissue instruments such as needle-holding forceps.

In suturing or stitching tissue together, when the needle is passed through the tissue to be sewn the needle end of the thread is passed several times around the body of the forceps, (generally three times), and then the other end of the thread is gripped by jaws of the forceps. This end of the thread is then drawn through loops thus made, and the two ends are pulled together to tighten the thread against the tissue.

To complete a knot, one or more turns can be made around the body of the forceps reversewise to the first several, e.g. three loops. The ends are again pulled tight to complete the knot against tissue. This can be repeated if desired.

It has been found that it is while sliding the loops down the body of the forceps that the thread will snag on the slightest projection on or crack formed by the positioning of parts of the forceps.

The hinge part of any present needle-holding or suturing forceps is made so that when the forceps are opened to grip the thread that has passed through the sides of the wound, the cracks or opening surfaces between parts of the forceps become wider and the thread, on numerous occasions, is trapped and snagged when the forceps are closed. This prevents the free running of the thread, so the knot to seal the wound cannot be completed, or sometimes even started.

The object of the present invention is to provide a forceps or like instrument having such a construction and/or arrangement of its parts that will ensure of the thread or other sewing material not snagging on a hinge joint or on any point of the instrument when suturing or stitching, providing a free-running surface for the suturing material.

Generally the invention consists of a forceps or like instrument having a covering shield attached to each member or leg at its pivoted end so as to cover any opening between engaged surfaces or projection at or about where each member or leg pivots so that thread or the like employed with the forceps will be prevented from dropping into an opening between surfaces or about projections of the forceps.

In further describing the construction and function of the invention, reference will be made hereinafter to the accompanying drawing in which:

FIG. 1 is a perspective plan view of the forceps in the closed position,

FIG. 2 is a similar view of a main part of the forceps in an opened position,

FIG. 3 is a side view of the forceps, and

FIG. 4 is an enlarged cross section taken on the line 4-4 in FIG. 1.

In giving effect to the invention, as a preferred embodiment, the forceps generally consists of two members 10, 11 of a relatively narrow cross section, which members are pivoted together upon a screw 12 towards their outer ends or jaws 13,

14 and a spring 15 is set between the members 10, 11 to normally hold such outer ends or jaws open. These jaws 13, 14 open fairly widely relative to one another and are formed so as to take and grip the fine surgical thread employed.

Dependent upon this opening is each forceps member 10 or 11 formed by being cut back to allow for the mutual cooperation of the other member. In this respect is the length of the shield 16 of each member determined.

Preferably the shield 16 of each member is made of a suitable thin material such as fine gauge sheet copper strip, stainless steel or any suitable metal or plastic material. This strip has a width to suit the side of each forceps member, in plan view, and the strip is gradually curved at its ends to a narrowed extremity. This can be effected after the strip has been positioned along the member 10 or 11 over the pivot screw 12 and brazed, welded or silver-soldered to the member. The joints are then ground and polished off to suit the periphery of the cross section of the member at the localities of the joints and so as to give a very smooth finish.

Each member 10 or 11 having such a shield, the latter extends across openings between pivot areas of the members.

Thus the thread 17 on being employed with my improved forceps cannot be trapped or snagged, but slides easily down to the end of the forceps, and the free end of the thread can now be pulled through the loops as earlier mentioned to make the first and second part of the knot.

Finally it is to be understood that the term "forceps" is intended to include all needle-holding forceps as Gillies, Hegar, Mosquito, Spencer Wells, etc., or any instrument used in the sewing of wounds, or eye-suturing forceps, or those used in tying surgeons knots or other kinds of knots for tying up tissues.

It is pertinent to this patent that where desired all needle-holding forceps can be adapted by having the snagproof shield fitted to them. In the manufacture of new needle-holding forceps the hinge may be ground down on each side so that the shield may fit in more snugly and so not make the shield part thicker.

Instead of the screw 12, a plain pin or axle for the hinge can be held in place by the shields 15 on both sides of the members or legs.

I claim:

1. In a forceps or the like comprising a pair of members each of which has a jaw and a handle portion, and means pivotally securing said members together for opening and closing movement of the jaws relative to each other about an axis upon manipulation of the handle portions; the improvement comprising a pair of shields fixedly secured to opposite sides of the forceps one on each said member, each said shield being a thin, flat strip of material that extends from over the jaw of one member, across the other member at said axis, and terminates over the handle portion of said one member, one end of the strip being secured to the jaw of said one member.

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