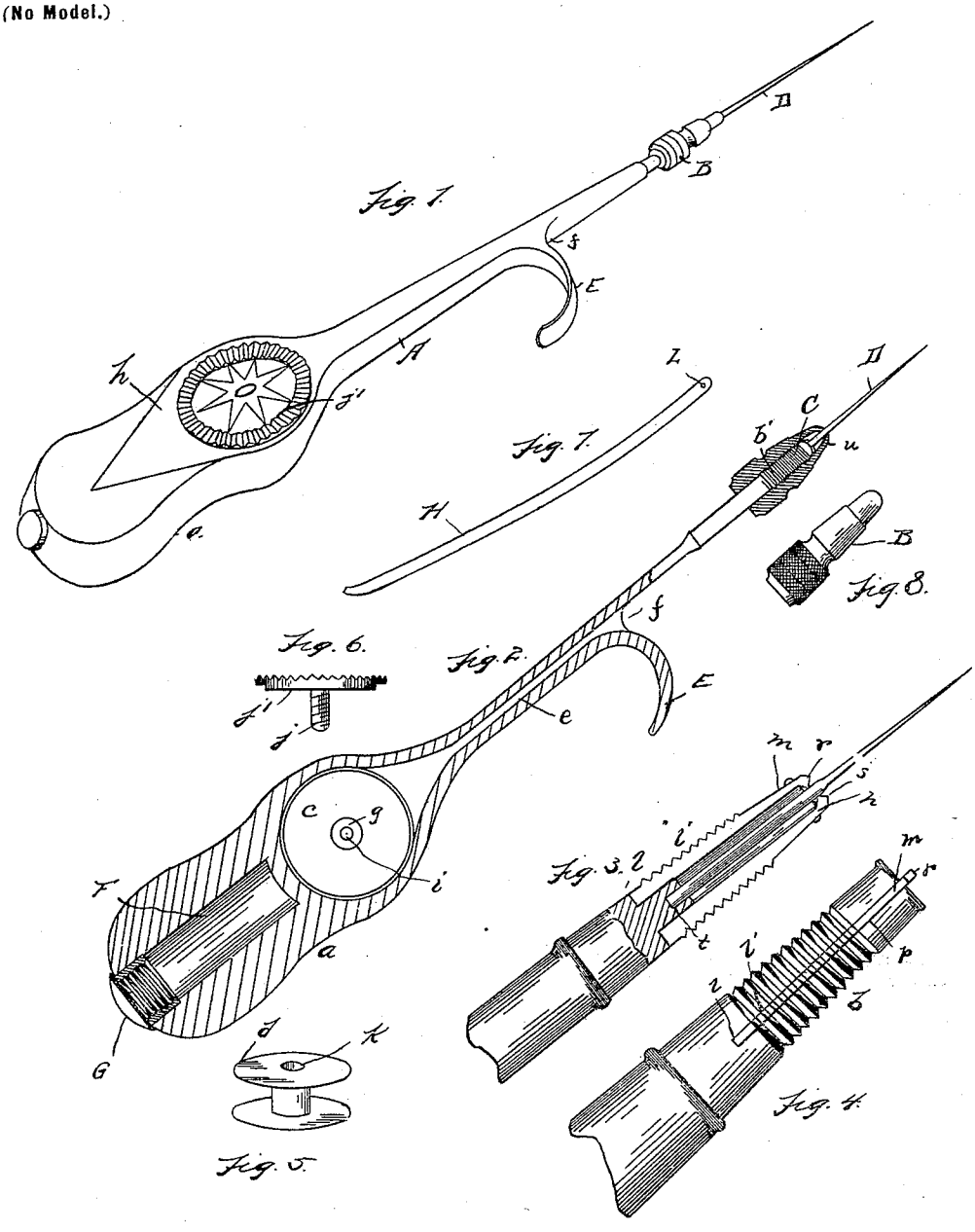
No. 640,853. Patented Jan. 9, 1900.

G. E. T. ARNOLD.

SURGICAL SEWING INSTRUMENT.

(Application filed Aug. 3, 1898.)

(No Model.)



WITNESSES

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GEORGE E. T. ARNOLD, OF LANCASTER, KENTUCKY.

SURGICAL SEWING INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 640,853, dated January 9, 1900.

Application filed August 3, 1898. Serial No. 687,609. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. T. ARNOLD, a citizen of the United States, residing at Lancaster, in the county of Garrard and State of Kentucky, have invented certain new and useful Improvements in Surgical Sewing Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in surgical sewing instruments, and has for its object to provide a simple economical device for holding a needle and a bobbin upon which the thread to be employed in the suture is carried.

A further object of this invention is to furnish a light convenient implement that can easily be held in the hand of the operator, thus enabling him to employ the free hand to assist in operating the thread or gathering the parts to be united.

The invention consists in the general construction and arrangement of the various parts to be hereinafter described, and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 shows my invention in perspective, illustrating it in its complete assembled form. Fig. 2 is a longitudinal section showing the threadway and the recess within which the bobbin is held. Fig. 3 is an enlarged longitudinal section of that end in which the needle is engaged. Fig. 4 is a detail side elevation of the needle end, showing one arm of the spring needle-clamp. Fig. 5 is a perspective view of the bobbin. Fig. 6 is a side elevation of the cap employed for closing the bobbin-receptacle. Fig. 7 shows in perspective the flexible threading device, and Fig. 8 is an elevation of the needle-clamping screw.

Like letters of reference refer to corresponding parts throughout the various figures.

A represents the main body of the implement, one end *a* of which is somewhat enlarged to form a handle and the other end of which is reduced to a slender tapering shank, terminating at its outer end in the hollow externally-screw-threaded portion *b*. The handle *a* is recessed at *c* to receive the bobbin *d*, upon which the thread or other material is carried during the operation of sewing, and communicating with this recess there is a threadway *e* formed through the reduced portion of the body A to within a short distance of the rear of the needle-clamp. At the point *f* the threadway runs out of the shank, and the thread when drawn therethrough is led up to the needle upon the outside. At the center of the recess *c* and from the bottom thereof the hollow stem *g* rises substantially to a plane with the upper face *h* of the handle and is provided with the threaded opening *i*, within which the screw *j* of the inclosing cap *j'* is arranged to be engaged. The stem serves as a journal upon which the bobbin turns, the opening *k* therethrough being just large enough to engage freely over the said stem and to hold the edges of the bobbin from contact with the walls of the recess.

The forward or needle end of the instrument is threaded at *b* and is slotted from the extreme outer end back to the point indicated at *b*, and within these slots are located the spring clamping-jaws *m n*, held at their inner ends between the points *l* and *l'* and their forward ends permitted to move freely in the slots *p*. By this means the needle-engaging ends *r s* of the jaws are normally held out of the path of the needle by their spring action. As will be seen in Fig. 3, this end of the shank is recessed at *t* to receive the shank of the needle, and the jaws are adapted to be sprung into the recess. This is accomplished by means of the clamping-screw B, which is provided with the internally-threaded portion C, adapted to engage the thread *b* and the inclined end *u*, arranged to engage and compress the outer ends of the jaws as the nut is turned down upon the thread *b*. This forces them into clamping engagement with the shank of the needle D. The clamping-screw is carried back over the threaded portion of the stem, where it is slightly enlarged, and it is exteriorly milled, so as to furnish a convenient means for grasping when it is necessary to engage or remove it.

To assist the operator in holding the instrument, at the same time obviating any possibility of it slipping through the hand, I provide at E a finger-piece formed integral with

the shank and bent outward in a slight backward curve to engage with the forefinger of the operator. This, it will be evident, may be varied to suit the conditions without materially departing from the spirit of the invention.

If desired, a receptacle F may be formed in the handle, having the inclosing cap G at its outer end. This receptacle may also be varied without materially affecting the results.

From the foregoing the operation of my invention will be readily understood. Assuming the instrument to be empty, the thread or other material to be employed in the suture is wound upon the bobbin *b*. The lacing-strip H (shown in Fig. 7) is then inserted through the threadway in the shank and the end of the thread caught through the eye L and drawn through to the forward or needle end. The bobbin is then inserted in its receptacle within the handle and the cap *j'* screwed into place. The thread may then be passed through the needle-eye, whereupon the instrument is ready for use.

Having thus described my invention, what I claim is—

1. As a new article of manufacture a surgical sewing instrument comprising a shank and handle formed integral with each other, said handle being provided with a recess and said shank having a threadway therethrough communicating with said recess, a hollow stem in the latter, means for securing a needle within the end of said shank, a bobbin arranged to be carried within said recess and journaled upon the stem therein, and a screw passing into said stem and having a cap adapted to close said recess, as and for the purpose set forth.

2. In a surgical instrument, the combination of the main body A comprising a hollow stem and enlarged handle provided with a recess, said stem having the engaging finger-piece E extending therefrom, the bobbin *d* adapted to be engaged within the recess, the spring-jaws *m*, *n* secured at the forward end of said shank, said end being provided with a recess to receive the shank of a needle and externally threaded, the clamping-screw B arranged to engage over said threaded end and to force said clamping-jaws into engagement with said needle, and the cap *j'* adapted to close said recess, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE E. T. ARNOLD.

Witnesses:
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