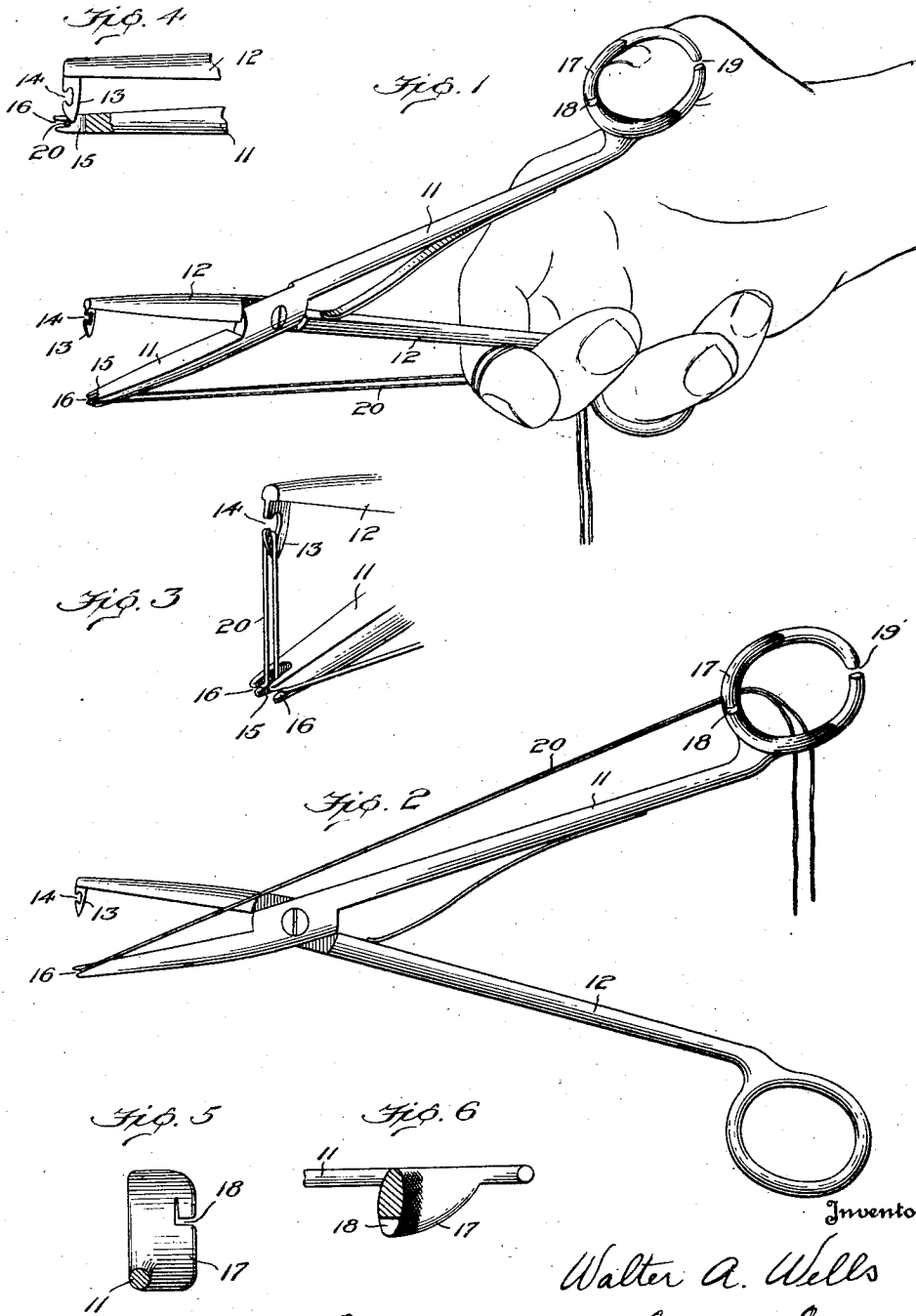


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W. A. WELLS  
SURGICAL INSTRUMENT

Filed Feb. 8, 1927



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## UNITED STATES PATENT OFFICE.

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## SURGICAL INSTRUMENT.

Application filed February 8, 1927. Serial No. 166,716.

My invention relates to surgical instruments and particularly to a suture placer.

A surgeon frequently finds it necessary to place sutures in various parts, cavities and recesses of the body, in order to sew up wounds, tie bleeding blood vessels and so forth. In deep cavities this has been a very difficult operation. Generally a surgical needle and needle-holder has been used, but these curved needles sometimes break while held in the holder and forced through the tissues. Such accidents may have serious consequences because facility and speed are of the utmost importance in surgical operations, and especially in the case of a hemorrhage.

My invention meets this need, providing a means for placing sutures in the tonsil fossa in connection with tonsillectomy. With my devices a hole is made in the tissues and as the instrument is withdrawn a doubled thread is pulled through this hole and when it projects far enough is easily released from the instrument. It is then in position for readily tying over the bleeding vessels to stop the hemorrhage.

In the accompanying drawings illustrating a preferred form of my invention:

Figure 1 is a side view of my instrument ready for use.

Figure 2 is a similar view showing the ends of the thread frictionally held by the instrument.

Figure 3 is an enlarged detail showing a thread drawn upwardly in a long loop.

Figure 4 is a detail showing the initial contact of the thread and needle, partly in section.

Figure 5 is an enlarged sectional view showing the tapered slot in one handle.

Figure 6 is another enlarged sectional view of this handle.

In these drawings 11, 12, represent pivotally connected members of a pair of forceps provided with a needle-like member 13 extending from the face of the member 12 in the direction of its companion 11. The needle 13 is provided with an outwardly open eye 14.

The member 11 is provided with a slot 15 to permit the passage of the needle 13, and with a transverse slot 16 of less depth than slot 15 for holding a surgical thread and guiding it into the eye 14 of the needle. This is clearly shown in Fig. 4.

The handle portion of the member 12 is

extended outwardly at 17 and provided with a tapered slot 18 and a transverse slot 19 extending entirely through the handle.

Two ways of using the instrument are shown—in both of which the surgical thread 20 is placed in the slot 16 and is yieldingly held either as in Fig. 1 by the surgeon looping the ends of the thread around a finger to control the tension, or as in Fig. 2 in which these ends have been passed through the slot 19 and wedged into the slot 18. A nurse may thread the instrument ready for use as shown in Fig. 2, in which case the surgeon may regulate the tension by loosening the thread in the slot 18 and pressing the thread against the inside of the thumb piece. By forcing the needle through the tissues at the point at which a suture is needed, a hole is made through which a loop of thread is drawn, see Fig. 3, by opening the forceps, and when sufficiently exposed for grasping, the thread is released from the forceps through the eye 14 and slot 16. The surgeon quickly completes the suture by tying the ends of the doubled thread.

Modifications of the form illustrated, within the scope of the claims may obviously be made, whereby special needs or preferences may be met.

What I claim is:

1. In a surgical instrument, the combination with a pair of jaws, of a needle extending from the face of one jaw in the direction of the companion jaw and provided with a transverse suture receiving notch, the companion jaw being provided with a needle receiving recess and an outwardly open transverse slot adapted to form a suture holder during the operation of the instrument.

2. In a suture placer, the combination with a needle member provided with a transverse suture receiving notch and a co-acting abutment member provided with a needle receiving slot and a transverse suture holding slot which holds a suture during the operation of the suture placer.

3. In a device of the class described, the combination with a forceps member provided with a needle receiving slot, a transverse thread guiding slot and means for yieldingly holding a thread, and a needle provided with a transverse thread receiving notch mounted to pass into said needle receiving slot.

4. In a device of the class described, the combination with a forceps member provided with a needle receiving slot, a transverse thread guiding holding slot and a tapered thread holding groove at another point, and a companion forceps member integrally united with a needle member having a transverse thread receiving notch. 15
5. In a device of the class described, the combination with a forceps member provided with a distally open needle receiving slot, a distally open transverse thread holding slot of less depth than said needle slot, a handle of said forceps member provided with a tapered thread holding slot and at another point with a transverse slot passing entirely through a loop of said handle, and a companion forceps member provided with a needle having an inclined face and a transverse thread receiving notch. 20
6. In a suture placer, the combination with a needle member provided with a distally slotted eye, of a co-acting abutment member provided with a needle receiving slot and a transverse thread holding slot. 25

In testimony whereof I hereunto affix my signature.

WALTER A. WELLS.