

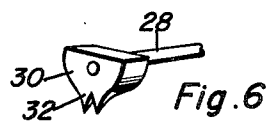
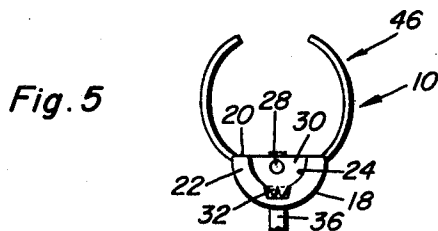
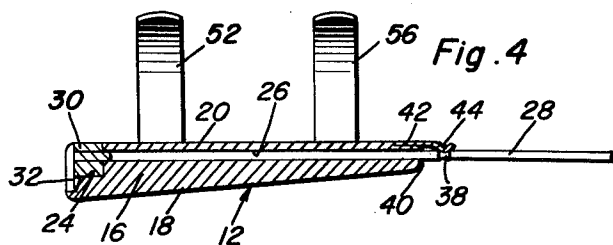
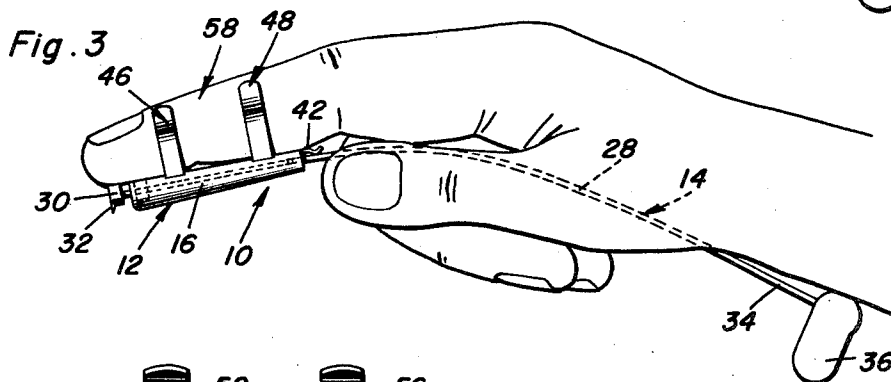
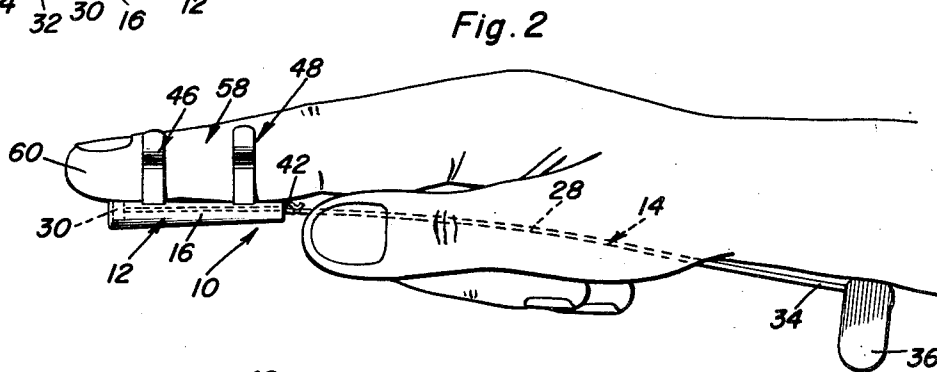
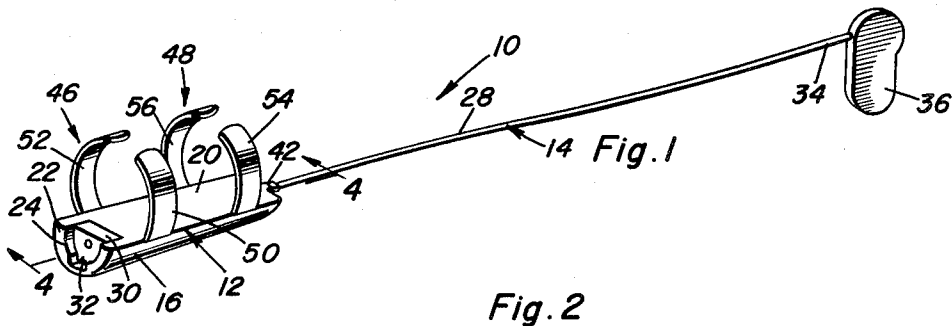
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2,811,969

OBSTETRICAL INSTRUMENT

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2,811,969

OBSTETRICAL INSTRUMENT

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3 Claims. (Cl. 128—303)

This invention relates generally to obstetrical instruments and is more particularly concerned with an obstetrical instrument for rupturing the amniotic sac and minimizing danger to the mother and the fetus.

A further object of invention in conformance with that set forth above is to provide an obstetrical instrument which is readily sterilized, and which permits a user's finger to be utilized as an "examining" finger and subsequently as an "operating" finger upon the determination of the anatomical situation relative to the palpations of the foetal membranes prior to giving birth in order that it may be determined when the amniotic sac should be ruptured for permitting the release of the amniotic fluid.

A more specific object of invention in conformance with that set forth above is to provide an obstetrical instrument of the character set forth which incorporates a sheath member reciprocally accommodating a flexible body member having a cutter element on one end reciprocally received in a recess portion on the end of the sheath member whereupon said sheath member may be inserted into an examining position relative to the amniotic sac and the cutter element may be extended into juxtaposition against the outer surface of the amniotic sac whereupon reciprocal movement of the flexible body by movement of the sheath member will reciprocate said cutter element into tangential relationship to the outer surface of the amniotic sac for rupturing the same and releasing the amniotic fluid therefrom with the minimum of danger to the fetus contained therein.

A further object of invention in conformance with that set forth above is to provide an obstetrical instrument of the character set forth which is easily and economically manufactured, readily and efficiently used, and highly acceptable and utilitarian for the purpose intended.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the novel obstetrical instrument;

Figure 2 is a side elevational view of the obstetrical instrument as shown in position with a user's hand when the finger upon which the obstetrical instrument is mounted is being utilized as an "examining" finger;

Figure 3 is a view similar to Figure 2 showing the position of the obstetrical instrument when the finger upon which the obstetrical instrument is mounted is being utilized as an "operating" finger, this view showing the cutter element extended from the sheath member;

Figure 4 is an enlarged sectional view taken substantially on line 4—4 of Figure 1;

Figure 5 is an enlarged front elevational view of the novel obstetrical instrument; and

Figure 6 is an enlarged perspective view of the cutter element of the obstetrical instrument.

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Indicated generally at 10 is the novel obstetrical instrument which is utilized for rupturing the amniotic sac, and includes a sheath member 12 and a flexible body 14. The sheath member 12 includes the body portion 16 which may include a lower rounded surface 18, see Figure 4, which may taper gradually toward the rear, and including a flattened upper surface 20 which may be defined as a finger engaging surface. The forward end 22 of the body member includes an arcuate recess portion 24 which opens into the finger engaging surface 20 as most clearly seen in Figure 1. As most clearly seen in Figure 4, the body member 16 includes a longitudinally extending bore portion 26 which terminates in the recess portion 24 and which reciprocally receives therein a flexible wire or rod of any suitable material indicated at 28 and constituting a part of the flexible body 14.

The flexible rod or wire 28 has secured on one end thereof a transversely disposed cutter element 30 conforming to the arcuate recess 24 in the body member, said cutter element including a lower sharpened edge portion 32 which may include a plurality of sharpened teeth, see Figure 5, if desired. As seen in Figure 1 the width of the recess 24 is slightly thicker than the cutter element 30 and thus the cutter element 30 extends in the recess 24 inwardly of the surface 22 of the body member 16.

The flexible rod or body 28 includes on the rear end portion 34 a direction indicating element 36 secured thereon in any suitable manner, said directional indicating element 36 being disposed in the same direction from the rod 28 as is the cutter element 30, and thus when the body portion 16 is inserted in juxtaposition adjacent the amniotic sac the portion 36 will indicate the general direction of the cutting teeth 32 thus apprising the user as to where the cutting portion of the cutter element 30 is located.

When the cutter element 30 is located within the recess 24 a notch portion 38 extending about the rod 28, see Figure 4, is located adjacent the end 40 of the body member 16 and is engageable with the resilient clip element 42 suitably secured in rearward extending relationship from the finger engaging portion 20 of the body member, and including a resilient end portion 44 extending downwardly into intersecting relationship with the bore portion 26 of the body member, thus the portion 44 of the flexible clip element 42 engages in the notch 38 for retaining the cutter element 30 in a relatively fixed position with respect to the body member 16.

A pair of clip elements are indicated generally at 46 and 48 and include pairs of resilient arcuate segments 50 and 52, and 54 and 56, respectively, which extend upwardly in overlying relationship from the finger engaging portion 20 of the body member 16 for accommodating the finger 58 of the user of the instrument.

As seen in Figure 2, the finger 58 is inserted into position within the clip elements 46 and 48 with the tip 60 thereof extending beyond the end 22 of the body member 16, and in the position shown in Figure 2 the tip 60 of the finger 58 is considered to be the "examining" finger whereupon said finger-tip is free to determine by direct palpation the status of the cervix, membranes and parts adjacent thereto for determining the necessity for rupturing the amniotic sac. In this position it will be noted that the flexible body 28 lies in the palm of the hand of the user and the position indicator 36 will be extending externally of the vagina into which the examining finger 58 has been inserted. After it has been determined that the amniotic sac should be ruptured to permit the release of the amniotic fluid therein, removal of the finger is not necessary and the instrument is manipulated in the position shown in Figure 3 whereupon the flexible body 28 is bent and the body member 16 of the instrument is

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moved rearwardly on said flexible body 28 whereupon the cutter element 30 is exposed into a cutting position and the finger 58 becomes the "operating" finger whereupon the cutting element 30 is oscillated on the flexible body 28 and the cutter portion 32 thereof will move in a direction tangent to the external surface of the amniotic sac thus minimizing the danger to the fetus contained therein.

Various positional directional terms such as "front," "rear," etc. are utilized herein to have only a relative connotation to aid in describing the device and are not intended to require any particular orientation with respect to any external elements.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. An obstetrical instrument for rupturing an amniotic sac comprising a sheath member, an elongated flexible body reciprocally supported by said sheath member, said sheath member including a recess portion disposed in intersecting relationship to the flexible body, and a cutter element secured on an end portion of said flexible body and movable therewith, said cutter element being extendible into and out of the recess portion upon relative movement between the sheath member and flexible body, said sheath member including a finger engaging surface portion, a longitudinal bore portion extending through said sheath member and in which the flexible body is reciprocally received, the recess portion of said sheath member communicating with the bore portion extending through said sheath member, said recess portion opening into the finger engaging surface of said sheath member.

2. An obstetrical instrument for rupturing an amniotic

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sac comprising a sheath member, an elongated flexible body reciprocally supported by said sheath member, said sheath member including a recess portion disposed in intersecting relationship to the flexible body, and a cutter element secured on an end portion of said flexible body and movable therewith, said cutter element being extendible into and out of the recess portion upon relative movement between the sheath member and flexible body, said sheath member including a resilient clip element extending into intersecting relationship with the bore portion of said sheath member, the flexible body including a notch portion engageable with said clip element for retaining said cutter element in a fixed position relative to the recess portion in said sheath member.

3. An obstetrical instrument for rupturing an amniotic sac comprising a sheath member, an elongated flexible body reciprocally supported by said sheath member, said sheath member including a recess portion disposed in intersecting relationship to the flexible body, and a cutter element secured on an end portion of said flexible body and movable therewith, said cutter element being extendible into and out of the recess portion upon relative movement between the sheath member and flexible body, the cutter element being secured normal to one end portion of the flexible body, and direction indicating means secured normal to the opposite end of the flexible body in the same direction as said cutter element for indicating the relative position of said cutter element when the instrument has been inserted into a position adjacent an amniotic sac for rupturing the same.

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