

[54] AMNIOTOMY GLOVE

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[58] Field of Search ..... 128/361; 2/159, 160, 161 R

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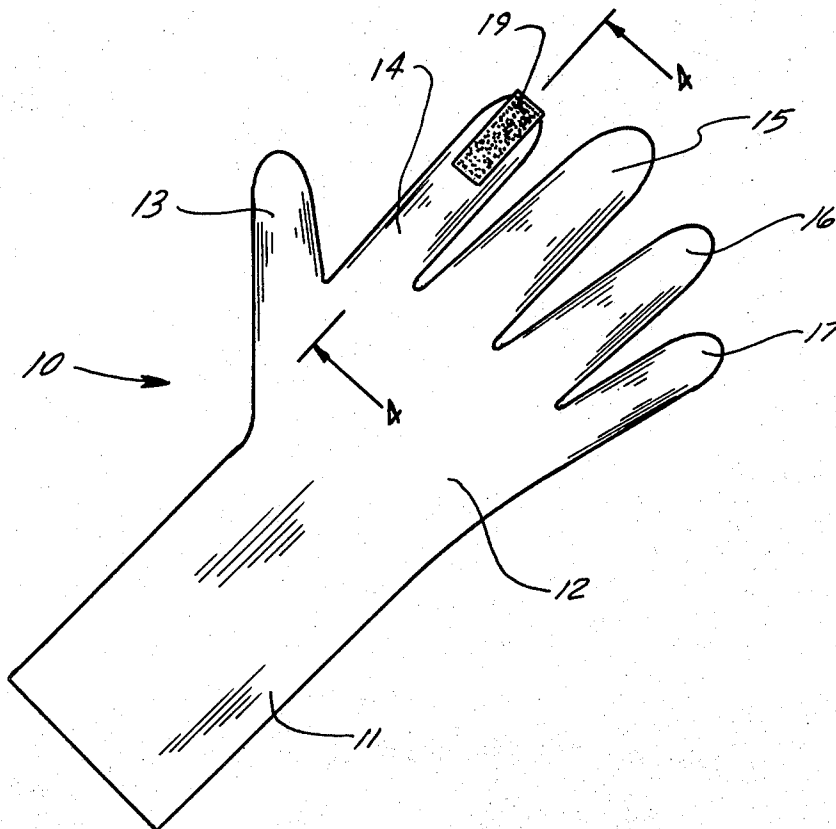
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[57] **ABSTRACT**

An amniotomy glove and method of performing an amniotomy, the glove used to rupture the amniotic membranes or the like wherein the glove is a regular examining glove having an abrasive member secured to or integral with a tip of the finger thereof.

**7 Claims, 4 Drawing Figures**



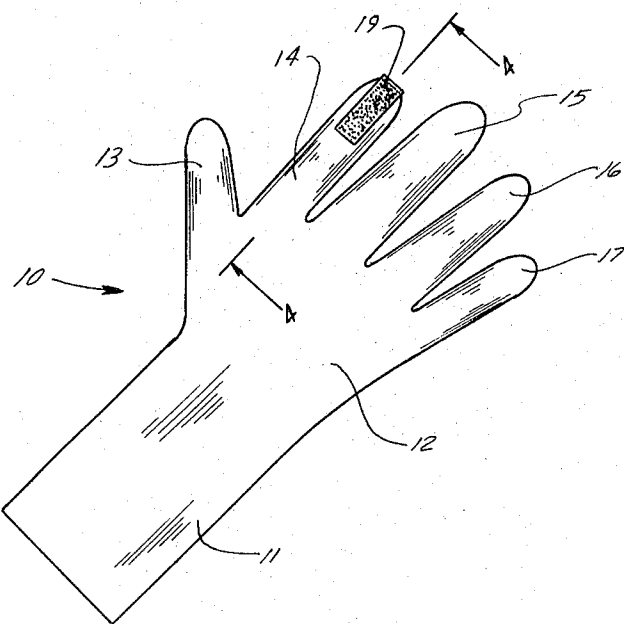


FIG. 1

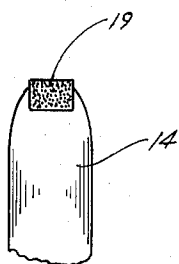


FIG. 2

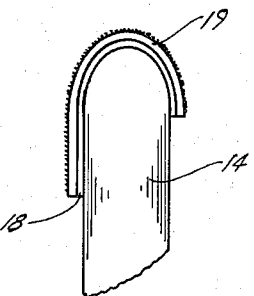


FIG. 3

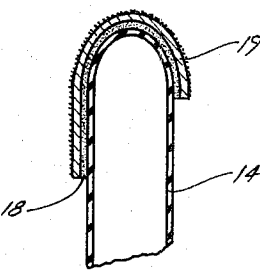


FIG. 4

## AMNIOTOMY GLOVE

## BACKGROUND OF THE INVENTION

This invention relates generally to a surgical glove and more particularly to an amniotomy glove for artificially rupturing the amniotic membranes particularly for the induction of labor.

The amniotic membranes, or amniotic sac, is composed of two layers, the amnion and the chorion. The fetus floats in the amnion and the amnion is surrounded by the chorion.

The medical profession recognizes that a most certain way to induce labor is the rupture of the amniotic membranes. To accomplish the rupture of these membranes, one or two fingers are inserted into the cervix via the vagina. The head of the baby is displaced slightly and a long clamp dressing forceps or a long pair of scissors is directed by the other hand along the fingers in the vagina until the cervix is reached, the end of the instrument is then guided through the cervix until the membranes and the baby's head are reached, and then end of the instrument is either forced against the membranes or pressed up and down against the membranes to cause rupture. The membranes can also be grasped between the end of the forceps and pulled gently, thus causing them to rupture.

Another method is to first strip the membranes from their uterine attachment for a distance of about two inches and then puncturing them with a sharp hook. Recently, a new device has been developed which is basically a ring having a hook formed from plastic projecting outwardly of the ring, wherein the ring fits on the tip of a finger. Use of this device permits the use of just one finger instead of two hands to rupture the membranes.

The disadvantages of the above methods and instruments is thus obvious as the use of any instrument can damage the walls of the vagina, the walls of the cervix, or the head of the baby. The utilization of the hook ring device provides no guidance of the hook by the other hand and in addition the tactile sense in the examining finger is lost.

## SUMMARY OF THE INVENTION

This invention relates to an improved device and method for artificially rupturing the amniotic membranes. The device is a regular examining glove having an abrasive member secured to or integral with a tip of a finger thereof. In particular, the abrasive material is in the form of a piece of sandpaper or the like which is secured to the surface of either the index or middle finger of the glove and extends from about the middle of the location of the fingernail over the tip of the finger and then toward the palm for a distance equal to approximately twice the length of the material on the fingernail side of the glove.

The method of use entails the sterilization of the amniotomy glove, the donning of the sterile glove, the insertion of the finger having the abrasive end into the vagina and through the cervix wherein the abrasive end contacts the amniotic membranes, the abrasive end is then moved backward and forward in a scratching motion against the membranes until the membranes rupture.

It is therefore an object of this invention to provide a novel amniotomy glove.

Another object of this invention is the provision of a medical glove having an abrasive member disposed on the distal end of one of the fingers, the glove being provided for the use of a medical practitioner in performing medical or surgical procedure and in particular the rupturing of membranes sac or the amniotic sac.

A further object of this invention is to provide an amniotomy glove which does not have a sharp or hard device connected therewith which can cause damage to the walls of the anatomical passages or to a fetus contained in the amniotic sac.

Yet another object of this invention is the provision of an amniotomy glove for artificially rupturing the amniotic membranes wherein no sharp or blunt instruments are used and wherein only one hand of the medical practitioner is utilized in the amniotomy.

Yet a further object of this invention is to provide an amniotomy glove which is extremely effective in use, simple in construction, and economical to manufacture.

Still another object of this invention is the provision of a method to perform an amniotomy wherein no instruments are used and the procedure can be accomplished with only one hand without damage to the walls of the vagina, the walls of the cervix or the fetus contained within the amniotic sac.

These objects and other features and advantages of this invention become more readily apparent upon reference to the following description when taken in conjunction with the appended drawings.

Still a further object of this invention is to provide a glove having an abrasive member secured to one of the fingers for performing an amniotomy wherein the tactile sense of the examining finger is substantially retained.

## BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings as herein described, a preferred embodiment of the invention is depicted, however various modifications and alternate constructions can be made thereto without departing from the true spirit and scope of the invention as defined hereinafter.

FIG. 1 is a front plan view of the amniotomy glove of this invention;

FIG. 2 is a partial rear plan view of one finger of the glove;

FIG. 3 is a side elevational view of said one finger; and

FIG. 4 is a sectional view taken along the lines 4 — 4 in FIG. 3.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, the amniotomy glove of this invention is indicated generally at 10 in FIG. 1. The glove is a conventional surgical glove 11 having a palm 12, a back (not shown), a thumb 13 and four fingers 14 — 17. Secured to the index finger 14 by contact adhesive 18 or the like, or integral with the index finger 14 is a strip of abrasive material 19, such as sandpaper. The abrasive material 19 (FIGS. 2 — 4) approximately one-fourth inch wide and three-fourths inch long, is disposed over the end of the finger 14 with approximately 1/4 thereof disposed on the back of the finger and about three-fourths thereof disposed over the top and on the front of the finger. Although the abrasive material is disposed on the index finger, it could be disposed

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on the middle finger, it is further immaterial whether it is disposed on the right or left glove.

Although a strip of abrasive material 19 is depicted, it has been found that a small piece of material 19, secured to or integral with the distal end of the finger of the glove 11, satisfactorily performs an amniotomy.

The procedure for performing the amniotomy with the amniotomy glove of this invention is as follows:

- a. the glove having the abrasive tipped finger is sterilized and then donned by the medical practitioner;
- b. the abrasive tipped finger is inserted into the vagina, through the cervix and against the amniotic sac;
- c. the amniotic sac is then scratched in a backward and forward manner until the sac ruptures.

This amniotomy glove, in addition to being adapted for use in performing an amniotomy can also be used for rupturing other membranes and for performing other surgical procedures.

I claim:

1. An amniotomy glove for use in rupturing the amniotic membranes comprising:

a sterilizable surgical glove having a palm, a back, a thumb and four fingers; and

an abrasive strip secured over a portion of the end of one of said fingers with a first portion of said strip secured to the back of said one finger, a second

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portion of said strip secured to the tip of said one finger and a third portion of said strip secured to the front of said one finger, thus having a portion of said one finger front and tip on both sides of said strip free for permitting tactile sense to the finger of the wearer of said glove.

2. An amniotomy glove as defined in claim 1 wherein said abrasive material is sandpaper.

3. An amniotomy glove as defined in claim 1 wherein said abrasive material is secured by an adhesive to said finger.

4. An amniotomy glove as defined in claim 3 wherein said abrasive material is sandpaper.

5. An amniotomy glove as defined in claim 2 wherein approximately one-fourth of said abrasive material is disposed on the back of said finger and the remaining portion of said abrasive material is disposed over the tip and on the front of said finger.

6. An amniotomy glove as defined in claim 4 wherein approximately one-fourth of said abrasive material is disposed on the back of said finger and the remaining portion of said abrasive material is disposed over the tip and on the front of said finger.

7. A method of performing an amniotomy comprising the step of scratching the amniotic membranes with an abrasive material until the membranes rupture.

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