

- [54] **DEVICE FOR FIXATION OF
PREPARTURIENT VAGINAL PROLAPSE**
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85/8.3

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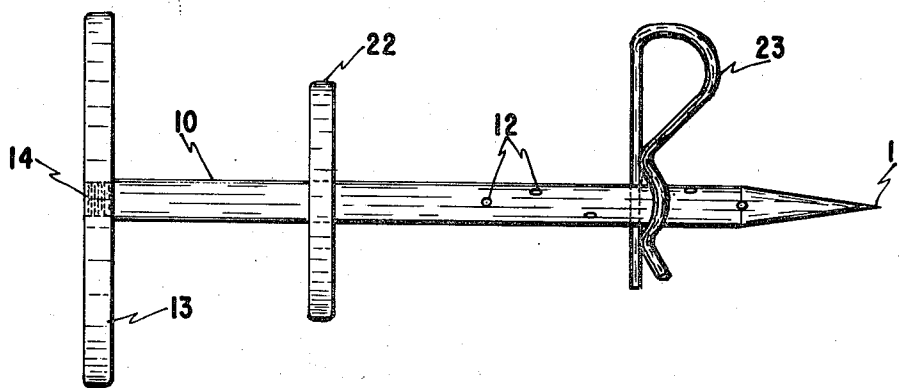
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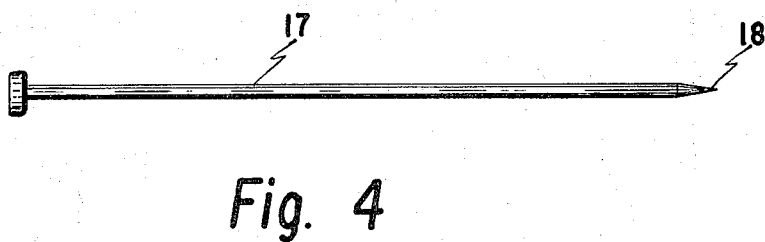
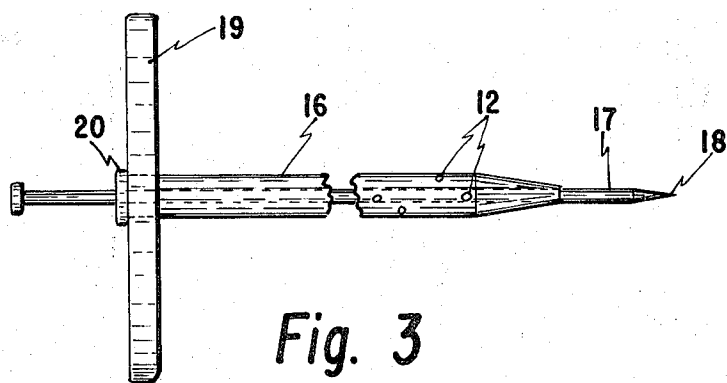
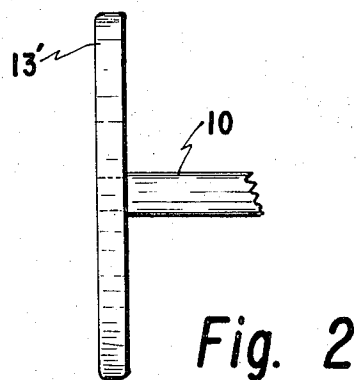
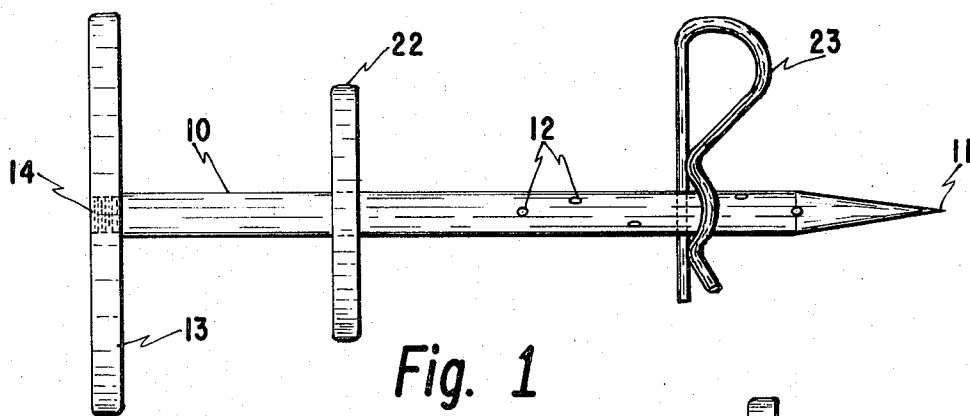
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[57] **ABSTRACT**

A device for fixation of preparturient vaginal prolapse in large animals consisting of a headed pin adapted to be inserted through the vaginal wall and exterior tissues and a washer-like member held in position on the outside so that the interior button will hold the vaginal wall in place during parturition.

5 Claims, 4 Drawing Figures





DEVICE FOR FIXATION OF PREPARTURIENT VAGINAL PROLAPSE

BACKGROUND AND SUMMARY OF THE INVENTION

This invention pertains to veterinary devices and particularly to a device for fixation of vaginal prolapse in a preparturient cow or similar large animal.

As is well known in the veterinary art, vaginal prolapse in cows frequently interferes with normal parturition. The problem then becomes one either of fixation of the prolapse before parturition and release afterwards or of manual manipulation during parturition to achieve normal or near normal calving.

The usual methods of fixation usually involve some sort of suturing to provide support of the vaginal wall. Such suture methods are not always easy and may result in the tearing of delicate tissues and therefore are often not successful.

By our device we provide an easy and usually successful means for accomplishing adequate fixation of the prolapse so that normal calving is accomplished. Further, our device is very easily removable without serious damage to the cow so that it can be reused during subsequent calvings of the same cow.

FIGURES

FIG. 1 is a view of a preferred embodiment of our device completely assembled.

FIG. 2 is a partial view of an alternate form of head on the pin of our device.

FIG. 3 is a view similar to FIG. 1 of the pin only of an alternate embodiment.

FIG. 4 is a view of the insertion device of the pin shown in FIG. 3.

DESCRIPTION

Briefly our invention comprises a large headed pin adapted to be inserted through the vaginal wall and tissues exterior thereof and then fastened in position so that the head of the pin supports the vaginal wall.

More specifically and referring to the drawings, our invention comprises, in its preferred embodiment, a pin 10 formed of a plastic material and adapted to be sterilized. The pin is formed with a sharp point 11 at one end, near which a series of holes 12 is formed diametrically through the pin. A large head 13 adapted to support the vaginal wall is fastened to the pin itself.

We envision that the fastening of the head 13 to the shank of the pin 10 may be varied. For convenience in shipping, carrying or storage, it might be desirable that the head be readily detachable, and therefore, as shown in FIG. 1, we have provided for a threaded engagement as at 14. However, for ease of manufacture and therefore for economy, we can also provide, as shown in FIG. 2, for a permanent connection between the pin 10 and head 13. This connection may be made by using a press fit and a cement, or by molding the device as a single piece.

In either of the first two described embodiments, the central pin must be made of a material sufficiently strong to hold a sharp point for at least one insertion. This limits the choice of materials and also requires a relatively stiff pin.

Because the movements of the animal may cause a shifting of tissue through which the pin extends, it might be desirable to use a more flexible material for

the pin, and we can provide that sort of device as shown in FIGS. 3 and 4. In this embodiment, the main body 16 of the pin is tubular having a longitudinal central opening. A guide pin 17 of stainless steel or the like is slidable within the central opening so that the point 18 on the guide pin 17 will break open the way for insertion of the body 16. Because the body 16 is of flexible plastic material, slightly more motion between the vaginal wall and the body of the cow can be tolerated by the flexing of the body 16 after the guide pin 17 is extracted.

A third means of attaching the head or button 19 to the body 16 is also illustrated. In this embodiment, the body 16 is formed with an enlarged end bulge 20. The button 19 can then be provided with an opening into which the body can be inserted, but which will not slide over the bulge 20. Thus, the button is readily removable for storage, but is firmly supported in place when used.

All of the devices described above are used in about the same way. Any animal with a known vaginal prolapse is a fit subject for the treatment. When used, the prolapse can be cleaned up, reduced and a determination made as to whether the problem is on the right or left side. This is preferably done under epidural anesthesia. Then the sharpened point 11 of the pin 10 can be pressed through the vaginal wall, sacroscopic ligament and other tissues and outward through the skin. A washer 22 is then placed over the pin. The washer 22 is then pressed down toward the head 13 and a key 23 is inserted through the hole 12 just beyond the washer. The large head 13 thus serves to hold the vaginal wall in place until after calving. Some seven to ten days later the pin can be withdrawn and the entire device removed without harm to the animal.

In the embodiment of FIGS. 3 and 4, it will be necessary to insert the pin 17 into the tubular body 16 before pressing the device through the tissues. Then, before fixing the washer in place, the pin is withdrawn. Thus, this pin acts as a stiffener and a trocar for the insertion of the body 16. In other respects, the action of the device is similar to that of previously described embodiments. The increased flexibility of the body in this device may be of some benefit over the stiffer pin of the previously described embodiments, but the increased cost of manufacture and the added clumsiness in use are considered disadvantages such that the previous embodiments are preferred.

We claim:

1. A device for fixation of preparturient vaginal prolapse in large animals comprising a pointed body member for insertion from the interior of the vagina through the walls thereof and tissues exterior thereof, said body member being formed to provide one sharp pointed end, button head means on said body member at the end opposite said pointed end adapted to support said vaginal walls, said body member being formed to provide a plurality of transverse holes therethrough adjacent said pointed end, washer means removably supported on said body member adapted to engage said exterior tissues, and pin means insertable in one of said holes to hold said washer means in place on said body member between said button head means and said one hole.

2. The device of claim 1 in which said button head means is removably attached to said body member.

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3. The device of claim 1 in which said body member is a composite member formed of an outer tubular member and an inner removable guide pin adapted to be removed before said washer means is fixed in place, said guide pin being longer than said tubular member and extending completely therethrough.

4. The device of claim 2 in which said body member is a composite member formed of a tubular flexible body member and a stiffened pointed guide pin removably inserted into said body member, said guide pin

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being longer than said tubular member and extending completely therethrough, said pin means being insertable only when said guide pin is removed.

5. The device of claim 1 in which said head means is formed with an opening therein embracing said body member and said body member is formed with a bulge at the end opposite said pointed end whereby the head is prevented from sliding off that end of said body member.

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