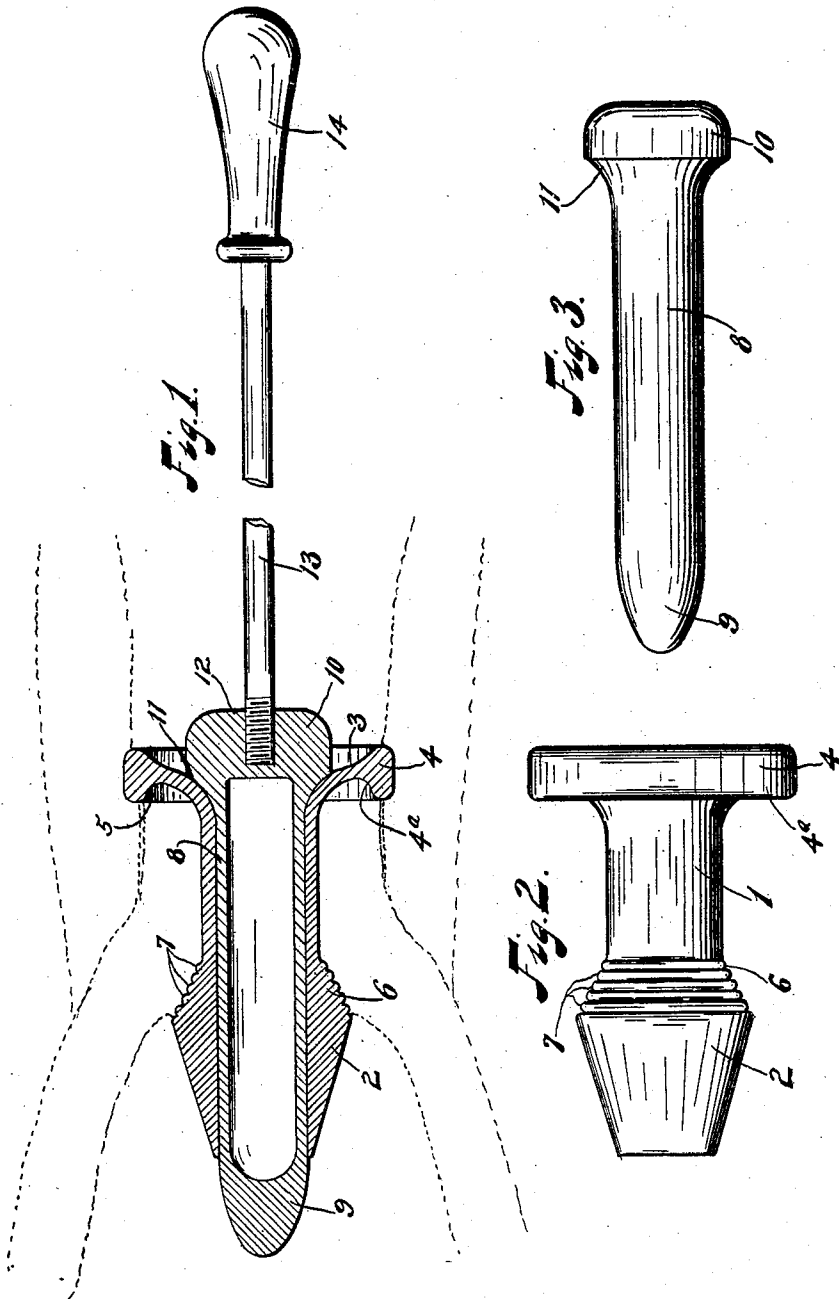


No. 876,775.

PATENTED JAN. 14, 1908.

I. O. CRITTENDEN,
VETERINARY DILATOR AND IMPREGNATOR.
APPLICATION FILED NOV. 22, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

IMMER O. CRITTENDEN, OF CLEVELAND, OHIO.

VETERINARY DILATOR AND IMPREGNATOR.

No. 876,775.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed November 22, 1906. Serial No. 344,528.

To all whom it may concern:

Be it known that I, IMMER O. CRITTENDEN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Veterinary Dilators and Impregnators, of which the following is a specification.

My invention relates to improvements in veterinary dilators and impregnators for use for aiding conception in breeding mares.

A very common cause of barrenness in mares is the fact that during the act of coition the mouth of the uterus is closed and remains closed sufficiently long to prevent conception taking place.

The paramount object of this invention is to remove the above mentioned cause for barrenness by providing a generally-improved instrument which may be readily inserted or introduced into the mouth and neck of the uterus by dilating the walls of the latter by means of the removable "dilator" part of the instrument, and, when the dilator has been removed, a central passage or opening is afforded within the "impregnator" part of the instrument for the entrance of semen during copulation, and the impregnator, by reason of its construction, is securely grasped and held in proper position by the contraction of the walls about the same.

Another object of the invention is to produce a device which will not only be securely held in proper position during coition, but which may be readily removed without injury to the walls of the generative organs.

With these ends in view, the invention consists in the novel construction, arrangement and combination of parts, hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a longitudinal sectional view of the complete instrument, the parts being shown in relative position when introduced for use. Fig. 2, a side elevation of the impregnator with dilator removed. Fig. 3, a side elevation of the removable dilator.

Similar characters of reference designate like parts throughout all the figures of the drawings.

The improved instrument comprises an

outer or main body portion termed an "impregnator", preferably constructed of flexible rubber of sufficient rigidity to prevent its being collapsed when in position, and an inner removable shank portion termed a "dilator" of hard rubber or other suitable and convenient material.

The impregnator comprises a tubular shank portion 1, terminating at one end in a truncated cone-shaped head 2, and at the other or base end in a funnel-shaped flange or disk 3, provided with an annular ring 4, having an annular flange 4^a, extending toward the head 2, the circumference or line of extension of said annular flange 4^a, being parallel with the axial line of the tubular shank portion 1, and affording an annular recess 5.

The head 2, terminates at its base in an annular inwardly and downwardly-inclined shoulder 6, extending from the outer periphery of said base to the outer periphery of the shank portion 1. The shoulder 6, is provided with a series of circumferential corrugations 7, designed to afford a gripping surface for the contracted inner walls of the mouth of the uterus when the impregnator is in position, as indicated in dotted lines of Fig. 1. The impregnator is provided with a central longitudinal opening designed to receive and take over a tubular or cylindrical-shaped dilator whereby the former is carried in through the vagina and the truncated cone-shaped head 2, pushed through the cervix or neck of the uterus, the same being first dilated by the conical end of the dilator hereinafter described.

The dilator comprises a shank portion 8, preferably of hard rubber and hollow as shown. It is provided with a beveled or conical end 9, and, when introduced into and carrying the impregnator the end 9, forms an apex for the truncated cone-shaped head 2, for the purpose above described. The rear end of the dilator terminates in a head 10, provided with an annular shoulder 11, having the contour of its abutting surface conforming to the contour of the contiguous walls of the funnel-shaped flange 3, surrounding the central opening of the impregnator. The head 10, is provided with a central threaded opening 12, designed to receive and take over the threaded end of a rod 13, provided with a handle 14.

In use, the end of the dilator is preferably

directed with the left hand to the mouth of the womb, and with a little pressure on the handle with the right hand, the point of the dilator will open the mouth of the womb and the end of the impregnator will slip in. It should be inserted until the flange or large end of the impregnator is close up against the edges of the mouth of the womb, as shown in Fig. 1, when the dilator should be removed, and the mare is ready to breed. The corrugations 7, about the periphery of the shoulder 6, will securely hold the impregnator in proper position during coition and will prevent the mare from moving it out of position by straining and contracting the walls of the uterus.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood.

Having thus described my invention, what

I claim and desire to secure by Letters Patent is,—

An instrument of the class described, including an impregnator comprising a tubular shank provided at one end with a projecting annular flange and at its other end with an integral outstanding truncated-cone-shaped head and with an outstanding integral truncated-cone-shaped shoulder having its inclined surface roughened and extending in an opposite direction from the inclined surface of the head, the bases of the said head and shoulder being coincident.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

IMMER O. CRITTENDEN.

Witnesses:

OBED C. BILLMAN,
JEANNETTE BILLMAN.