Oct. 15, 1940. W. L. SCHMITZ, JR 2,218,009

INTRODUCER

Filed Aug. 10, 1931

Fig. 1

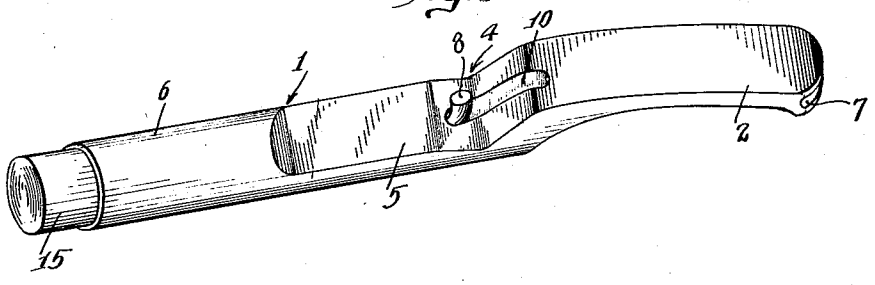



Fig. 2

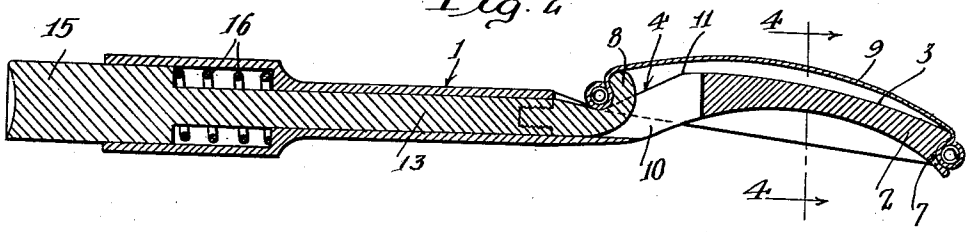



Fig. 3

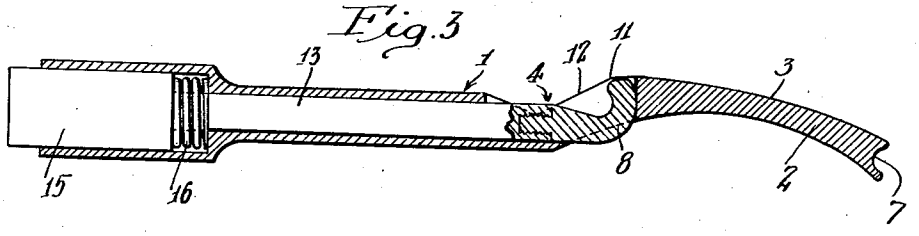



Fig. 4

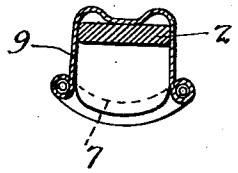
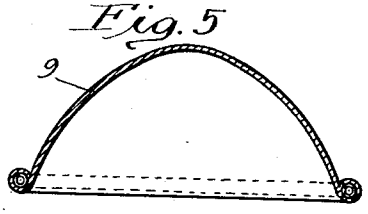



Fig. 5




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# UNITED STATES PATENT OFFICE

2,218,009

## INTRODUCER

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Application August 10, 1931, Serial No. 556,087

4 Claims. (Cl. 128—127)

This invention relates to a device to be used for introducing an expansible article through a relatively small neck into a cavity in which the article is left. While the invention is capable of use for many specific purposes, it is intended to have its greatest usefulness for facilitating the placement of a cap over the mouth of the uterus. Such caps may be employed by physicians or surgeons under circumstances where it is desirable to temporarily cover the mouth of the uterus. Such caps are also used for the prevention of communicable diseases.

The general object of the invention is to provide a holding device of simple construction for holding an expansible article to enable it to be introduced through a small opening and then released from the holder.

More specifically, an object of the invention is to provide a holder or introducer to which an expansible circular cap can readily be attached, which will operate to hold the cap in an elongated condition and which can readily be operated from its outer end to release the cap after the introduction has been effected.

Further objects of the invention will appear hereinafter.

The invention consists of novel parts and combinations of parts to be described hereinafter, all of which contribute to produce an efficient introducer.

A preferred embodiment of the invention is described in the following specification, while the broad scope of the invention is pointed out in the appended claims.

In the drawing—

Figure 1 is a perspective of an introducer or holder embodying my invention.

Figure 2 is a longitudinal section through the device shown in Figure 1, and illustrating a cap being held by the introducer.

Figure 3 is a view similar to Figure 2, but showing the device without the cap and particularly illustrating how the parts of the device cooperate to effect the release of the cap.

Figure 4 is a cross-section on the line 4—4 of Figure 2.

Figure 5 is a cross-section through an article in the form of a cap of the type illustrated in Figures 2 and 4, and which can be held and placed in position by means of an introducer embodying my invention.

Referring more particularly to the parts, 1 indicates the body of the device which is of elongated form and preferably formed at its forward end into a head 2 having a slightly inclined face 3 on one side, and with a depression or recess 4 at the junction point between the head and a shank 5 of reduced thickness. Beyond the shank, a handle 6 is formed at the outer end of the device.

At the forward end, the head 2 is provided with means for engaging the article, and this means may be of any character or shape that adapts it for performing its function. In the present instance, I provide the forward edge of the head with a groove or recess 7 and prefer to round the head slightly as viewed in plan (see Figure 1).

On the side of the body and preferably at the inner end of the head, I provide a detent 8 preferably in the form of a rudimentary hook that projects out from the side of the body and which is constructed so as to cooperate with the holding means at the forward end of the head in holding an article such as an expansible cap 9 (see Figure 2).

Suitable means is provided for releasing the detent after the cap has been introduced. For this purpose, I prefer to mount the detent movably in a slot 10 formed in the side of the head and extending up through a shoulder 11 where the inclined bottom 12 of the recess 4 meets the inclined face 3 of the head.

The detent 8 is carried on the forward end of a plunger 13 received in a bore that communicates with the slot 10, the outer end of the plunger being provided with an enlarged head 15 so that a spring 16 can be placed under the head exerting its force in a direction to urge the detent toward the outer end or handle 6 of the device.

The detent may be attached to the plunger by a thread connection as indicated.

In using the device, the opposite edges of the article are held as shown in Figure 2 and when the article is to be released the head 15 is pressed inwardly. This moves the detent out in the slot and disengages it from the article. In doing this, the inclined face 12 at the shoulder 11 cooperates with the detent.

The cap 9 illustrated, is formed with a peripheral rubber cord or ring that stretches as indicated in Figures 2 and 4, thereby reducing the width of the cap so that it can be readily introduced through the vagina, placed in position and then released by pressing the head.

This device is most useful for the specific purpose described. In practice, it has been the custom heretofore to provide the cap with a lubricating jelly before introducing it. This renders the cap very slippery and prevents its being held

readily in the hand in placing it in devices that have been used for this purpose.

What I claim is:

1. An instrument for supporting a surgical appliance, spaced shoulder means in said instrument for engaging and holding the appliance under tension in an elongated position, and means forming a part of said instrument and carried therewith for releasing the appliance by pressing the article out of engagement with one of said shoulder means.

2. An introducer comprising an elongate body, a detent thereon on which a diaphragm pessary may be mounted and held in stretched position between the detent and another point on the body, means for moving the detent, and means serving to disengage the diaphragm from the detent upon moving the detent.

3. An introducer comprising an elongate body, a detent thereon on which a diaphragm pessary may be applied and stretched in ovate position between the detent and another point on the body, one or more inclined shoulders adjacent the detent adapted to cause the pessary to be dislodged from the detent upon relative movement taking place between the detent and the shoulders, and means for causing relative movement to take place between the detent and the body.

4. An introducer comprising an elongate body, a detent thereon on which a diaphragm pessary may be applied and stretched in ovate position between the detent and another point on the body, one or more inclined shoulders adjacent the detent adapted to cause the pessary to be dislodged from the detent upon relative movement taking place between the detent and the shoulders, and means for causing relative movement to take place between the detent and the body operable from the end of the body.

WILLIAM L. SCHMITZ, JR.