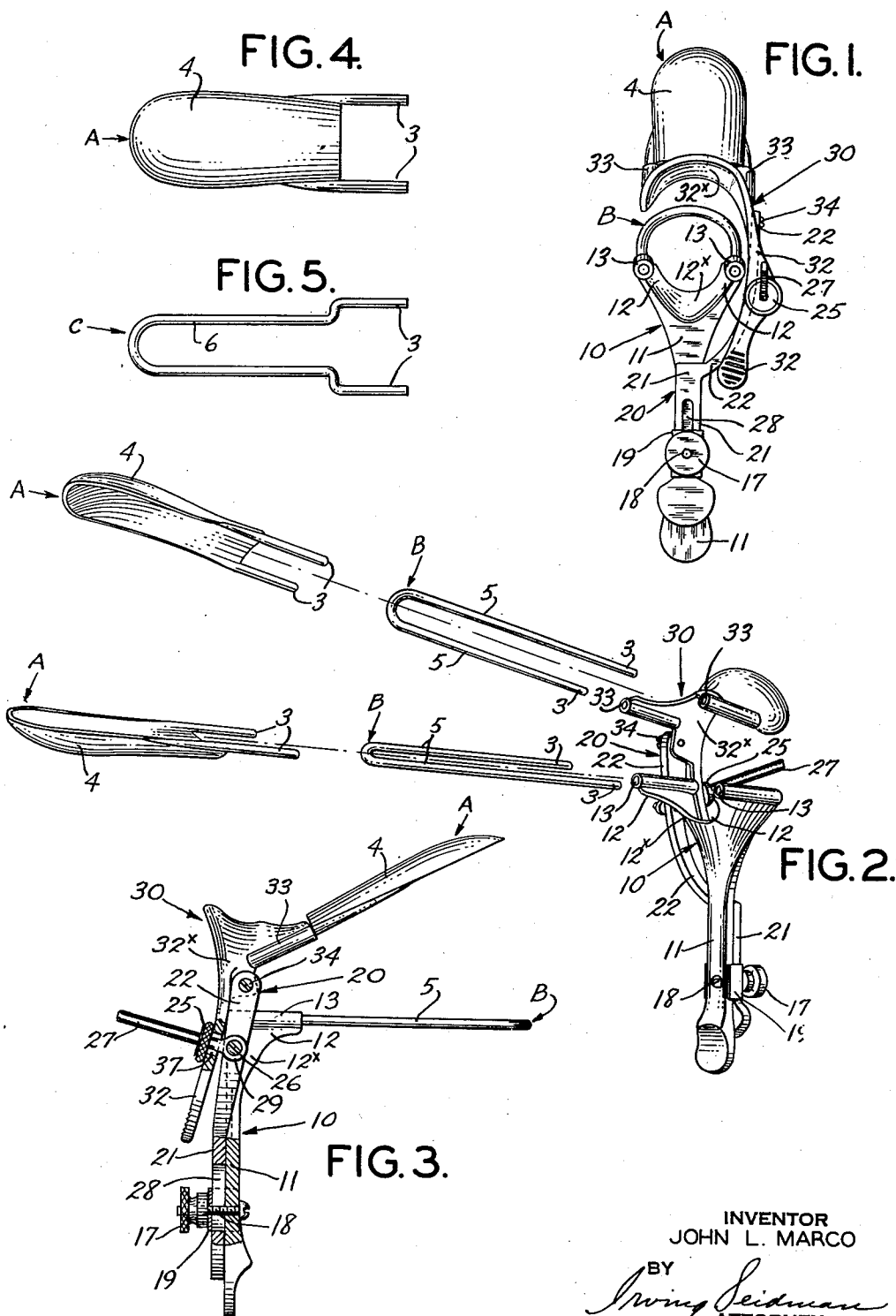


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VAGINAL SPECULUM
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VAGINAL SPECULUM

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This invention relates to a vaginal speculum. One of the objects of the invention is a vaginal speculum having interchangeable depressors, so that the depressor, or pair of depressors of the proper size and of the required shape may be inserted in the instrument. This would obviate the need of maintaining numerous specula of different sizes and of different shapes. An allied object is to provide a vaginal speculum having interchangeable depressors which are very easily removed from, or inserted in, the instrument.

Another object of the invention is to provide in a vaginal speculum of the interchangeable character described, wire depressors which will permit the maximum observation of the tissues. Another object of the invention is to provide a vaginal speculum which may be readily and thoroughly cleaned and sterilized, by reason of the removability of the depressors and especially, in the case of the aforesaid wire depressors.

Still another object is to provide a vaginal speculum of the type described in which there will be provision for a lateral opening so that speculum can be removed without disturbing or withdrawing an instrument which may be within the speculum. As a result, observation or X-ray focusing is facilitated and made easier and more effective.

For the attainment of the foregoing and such other objects as may appear or be pointed out herein, I have shown a preferred embodiment of my invention in the accompanying drawing, wherein:

Fig. 1 is a front view of the instrument.

Fig. 2 is a perspective view thereof.

Fig. 3 is a side view, taken from the side opposite to that of perspective view Fig. 2.

Fig. 4 is a top view of an interchangeable solid type of depressor, and

Fig. 5 is a top view of an interchangeable wire depressor.

The improved vaginal speculum of this invention comprises three main members, namely, a lower body member (generally designated 10), an upper slidable member (generally designated 20) and a pivoted member (generally designated 30). Lower body member 10 has a downwardly directed shank 11 which serves as the guideway or support of a similar shank 21 associated in the same relation with the upper slidable member 20. The upper member 20 is slidably mounted on the lower body member 10 by means of a collar member 19 which is secured to the shank 11 of the lower body member 10 and which embraces the shank 21 of the slidable member 20 but not

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tightly, so that the shank 21 thereof may move or slide within collar 19. Machine screw or stud 18 is firmly screwed into shank 11 and projects beyond it, as clearly seen in Fig. 3, to clear through an elongated slot 28 in the shank 21 of the slidable member 20. The upper slide member 20 may be secured, in adjusted position, to the body member 10 by tightening a hand-nut 17 provided at the end of belt 18, extending beyond the collar 19, see Fig. 3.

The shank 11 of the lower body member 10 is considerably longer than the shank 21 of the upper slide member 20, and is symmetrically bifurcated at its upper end, designated 12 $\times$ (see esp. Fig. 1) to provide a pair of ears 12, 12 which terminate in sleeves 13, 13 of small bore. The shank or slide 21 of the upper slide member 20 has at its upper end, an upward extension 22. It is important to note, see Fig. 2 and Fig. 1, that the upward extension 21 extends laterally (and upwardly) only on one side of shank 21; that is, there is no symmetrically-disposed extension on the other side (the reason of this asymmetrical construction will be later explained).

The above-mentioned pivoted member 30 is pivoted at the upper end of extension 21, as by means of a small screw 34 which is firmly screwed into the pivoted member 30 and clears in a hole at the upper end of extension 22. Said pivoted member 30 has a symmetrical bifurcated portion 32 $\times$ similar to the bifurcated portion 12 $\times$ of the body member 10. As best seen in Fig. 1, the bifurcated portion 32 $\times$ of slide member 30 is arcuate-shaped and occupies the upper half of the instrument, while the bifurcated portion 12 $\times$ of the body member 10 is likewise arcuate-shaped but occupies the lower half thereof. The bifurcated upper portion 32 $\times$ like the lower portion 12 $\times$, terminates in a pair of sleeves 33, 33 of small bore.

The pair of sleeves 13, 13 of the lower body member 10 is adapted to receive the tip ends 3 of the depressors (more fully described later); the pair of sleeves 33, 33 of the upper pivoted member 30 is also adapted to receive the same tip ends 3 of the depressors. In Fig. 4 is shown a depressor A of the solid type, having a solid portion 4 which is slightly concaved or cupped, as better seen in Figs. 2-3. To the shield or solid portion 4 of solid depressor 4 are secured the aforesaid pair of insertable tips 3 (which may be made integrally with the body portion 4). In Fig. 2 is also shown a pair of wire depressors B, B (one thereof also being shown in Fig. 3). Such fenestration depressors are formed of a length of wire 5

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formed in U-shape, providing ends which serve as the insertable ends 3, 3. A somewhat different style of wire depressor C is shown in Fig. 5, wherein the end portion 6 is made closer together than the standard spacing between insertable ends 3, 3. The wire from which the depressor is made has a degree of resiliency and the depressor is so shaped and dimensioned that there will be an extent of natural spring or tendency to urge the ends 3, 3 slightly apart, greater than the predetermined distance between bores 13, 13 and 33, 33. Hence the ends of the depressor are squeezed slightly for insertion, which imposes a functional pressure tending to hold the ends firmly within the bores of the sleeves.

The improved instrument is further provided with adjustable means to limit the pivotal movement of pivoted member 30 and also with a manual member to manipulate or open the pivoted member 30. For these purposes, the pivoted member 30 is provided with a downwardly-directed finger 32. It was explained above that the slide member 20 has an upwardly-directed extension 22 and that this was asymmetrical, being provided on one side only. Referring to Fig. 1, this upwardly-directed extension 22 is on the right-hand side. The above mentioned finger 32 is likewise on the right-hand side of the instrument.

The shanks 11, 21 of the two members 10, 20, especially the shank 11 of the body member 10, serve as a handle for holding the instrument. When so held in hand, the thumb is placed on the distal end of finger 32 of the pivoted member 30, so that slight pressure thereon opens or spreads the member 30 relative to the member 10. It is understood that in this manner the depressors may be inserted into the organ and spread apart to prepare the organ for inspection, medication, X-ray, etc. The pressure of the spread-open organ, bearing upon the pair of depressors, tends to close the instrument, i. e., to turn pivoted member 30 in the direction opposite to that caused by finger pressure on member 32. To limit the extent of such closing movement, so that the instrument will remain in open position to the extent desired, a stop is provided. This is in the form of a threaded spindle 27 having an eyelet 29 at one end by which it is pivotally mounted, as by a screw or rivet 26, to the upwardly-directed extension 22. As best seen in Fig. 3, threaded spindle 27 clears through a slightly elongated slot 37 in the aforesaid finger 32 of the pivoted member 30. A nut 25 on threaded spindle 27 serves as the adjustable stop to prevent (leftward, as viewed in Fig. 3) movement of the pivoted member, as the organ tends to close the depressor jaws.

By reason of the features of interchangeability, the pair of depressors may both be of the wire type (as B, B in Fig. 2) or both may be of the solid type (as A, A in said Fig. 2) or one may be solid (such as upper A in Fig. 3) and the other may be wire or fenestrated (such as lower B in said Fig. 3).

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Referring especially to Fig. 1 by reason of the aforesaid asymmetrical arrangement of the upward extension 22 and the downward finger 32 (both being on the left-hand side of the instrument), the other (right-hand, Fig. 1) is left entirely free so that the speculum can be removed without disturbing the instrument within it.

I claim:

1. In a vaginal speculum, in combination, a body member having a shank terminating at its upper end in an arcuate bifurcation presenting a pair of sleeves of small bore, a member having a shank slidably mounted on said shank of the body member and an upwardly-directed extension laterally projecting at a predetermined side of the shank, a member pivotally mounted at the upper end of said extension and having a downwardly-directed finger on the predetermined side and an arcuate bifurcation also presenting a pair of sleeves of small bore, the said arcuate bifurcation of the body member being disposed opposite, in lower relation, to said arcuate bifurcation of the pivoted member, and a pair of depressors each having a pair of equi-distanced ends interchangeably insertable in said two pairs of sleeves of the body member and of the pivoted member.

2. In a vaginal speculum, in combination, a body member having a shank terminating at its upper end in an arcuate bifurcation presenting a pair of sleeves of small bore, a member having a shank slidably mounted on said shank of the body member, a member pivotally mounted on said slide member and having an arcuate bifurcation also presenting a pair of sleeves of small bore, the said arcuate bifurcation of the body member being disposed opposite, in lower relation, to said arcuate bifurcation of the pivoted member, and a pair of depressors each having a pair of equi-distanced ends interchangeably insertable in said two pairs of sleeves of the body member and of the pivoted member.

3. A depressor for a vaginal speculum comprising a solid portion at the distal end thereof and a pair of rods extending from the proximal end thereof, said rods being parallel to each other and spaced apart a predetermined distance corresponding to the speculum.

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