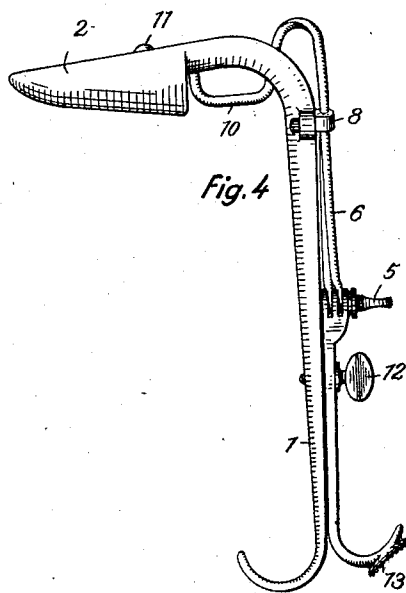
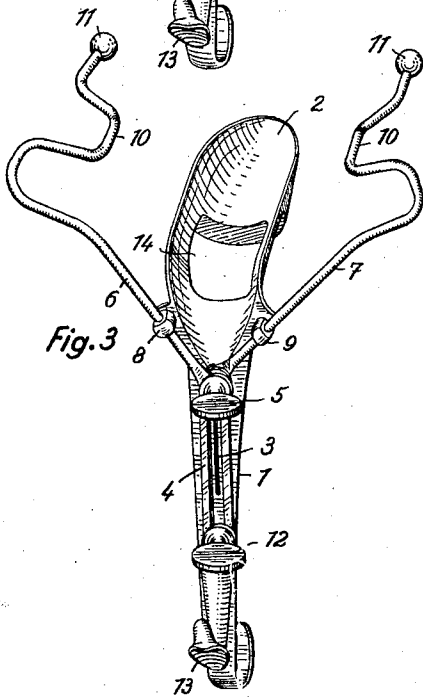
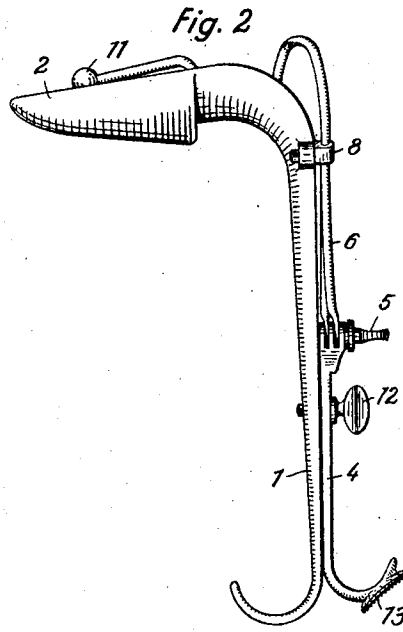
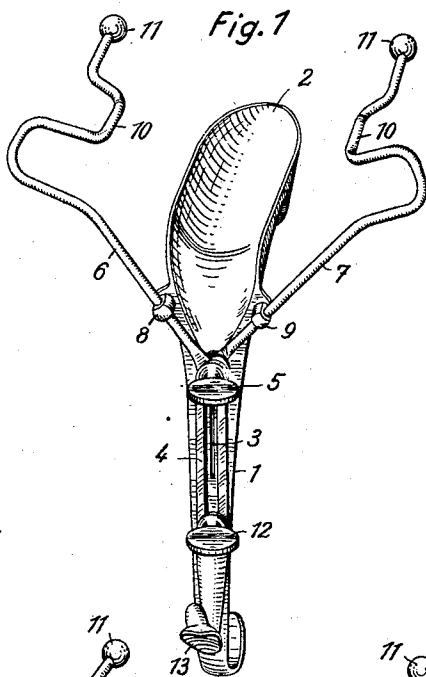


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1,614,065

E. GUTTMANN
VAGINAL SPECULUM
Filed May 24, 1926



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UNITED STATES PATENT OFFICE.

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VAGINAL SPECULUM.

Application filed May 24, 1926, Serial No. 111,399, and in Germany June 8, 1925.

This invention relates to a vaginal speculum and it has for its object, to improve the construction of the speculum so that it is securely held in the vagina and not pushed out at the least pressure exerted by the patient. Even if the vagina is spread out as much as possible, a speculum of commonly used type might be pushed out by the contraction of the constrictor cunni muscle so far that it has to be readjusted. The speculum of commonly used construction is therefore not capable to serve as substitute for an assistant surgeon. In the speculum of known type the entrance opening is comparatively narrow and the interior of the vagina is only dimly lighted by the day light so that the operation is greatly impeded.

It has been proposed to electrically light the speculum whereby; however, the inconvenience is not obviated that the interior of the vagina and especially the uterus are not easily accessible.

The speculum, according to this invention, is specially constructed from the point of view to make it adapted to the structure of the female pelvic-bone. The vagina extends anatomically from the entrance to the uterus underneath the acute angled pelvic arch. According to the invention the downwardly directed inclined arms of the pelvic arch are utilized as supports for holding the inserted speculum in its spread-out position so that it can be moved from this position neither by pull nor pressure, no pain being caused to the patient. The uterus can be brought, with the aid of the improved speculum, into the most favorable position for operations.

An embodiment of the invention is shown, by way of example, in the accompanying drawing in which:—

Fig. 1 shows the improved speculum in front elevation.

Fig. 2 is a side elevation of Fig. 1.

Fig. 3 shows in front elevation a slightly modified form of construction of the speculum shown in Fig. 1.

Fig. 4 is a side elevation of Fig. 3.

The improved speculum consists of a shaft 1 the front end of which is bent at right angles and of curved cross section. The front portion is thickened to form a shield 2 the rear edge of which forms a perpendicular shoulder. In the shaft 1 a longitudinal slot 3 is provided, and a slotted

slidable member 4 is placed upon this shaft 1. In the front end of the slotted member 4, two arms 6, 7 are pivotally mounted with the aid of a pivot screw 5, the inner end of which screw engages with the slot 3 of the shaft. The arms 6, 7 traverse each an eye 8, 9 fixed at the portion of the shaft where it merges into the shield 2. The arms 6, 7 are outwardly inclined from the pivot screw 5 and curved in forward and inward direction approximately at the point where the shield 2 begins so that the front portion of the arm stands at right angles to the rear portion. This front portion of the arms 6, 7 is bent again twice at right angles at 10 shortly before the ball-shaped point 11. A thumb screw 12 screwed through the slot of member 4 into the body of the shaft 1 serves to guide said slotted member 4. The slotted member 4 is outwardly bent at its lower end and carries a finger-plate 13.

A speculum constructed, especially for operations, is shown in Figs. 3 and 4. This speculum is of similar construction as the one, shown in and described with reference to Figs. 1 and 2 with the exception, however, that the arms 6, 7 are shorter, the balls 11 sitting directly upon the upwardly directed arm at 10. The bent front portion of the shaft 1 on which the plate-shaped portion behind the shield 2 is formed is plate-shaped and has an aperture 14. Instead of an aperture an indentation of convenient shape might be provided in the plate-shaped front portion of the shaft 1.

If the speculum is in the position of rest, the front portion and the bend 10 of the arms 6, 7 are located in the shield 2 or, in the speculum for operations shown in Figs. 3 and 4, accommodated in the aperture 14 or indentation of the plate-shaped portion of the shaft.

To insert the speculum into the vagina the thumb screw 12 has to be loosened so that, after the insertion, the slotted member 4 can be pushed forward by a slight pressure exerted upon the finger-plate 13, so that the arms 6, 7 spread out, and the bent portions 10 grip behind the downwardly directed arms of the pelvic arch so that the speculum is held securely in the vagina, the shield being pushed into the mucous membrane on the rear wall of the vagina. The ball-shaped points of the arms protect the vagina against injury at the insertion of the speculum.

I claim:—

1. A vaginal speculum, comprising in combination a shaft serving as handle and having a longitudinal slot, a shield at the front end of said shaft standing at right angles to said shaft, a slotted member shiftably mounted on said shaft, a screw bolt in the front end of said slotted member and engaging with said slot of said shaft, two eyes at the end of said shaft where it merges into said shield, two arms pivotably mounted on said screw bolt and traversing each one of said eyes said arms being curved forward so that the front parts are parallel to the shield, a bend at right angles being formed in the front part of each arm said bends being designed to grip behind the downwardly directed arms of the pelvic arch of the vagina, and ball-shaped points on said front ends.

2. A vaginal speculum, comprising in combination a shaft serving as handle and

having a longitudinal slot, a shield at the front end of said shaft standing at right angles to said shaft and a central aperture behind said shield, a slotted member shiftably mounted on said shaft, a screw bolt in the front end of said slotted member and engaging with said slot of said shaft, two eyes at the end of said shaft where it merges into said shield, two arms pivotably mounted on said screw bolt and traversing each one of said eyes said arms being curved forward so that the front parts are parallel to said shield, a bend at right angles being formed in the front part of each arm, said bends being designed to grip behind the downwardly directed arms of the pelvic arch of the vagina and to be accommodated in said aperture behind said shield if the arms are in the position of rest, and ball-shaped points on said front ends.

In testimony whereof I affix my signature.

EUGEN GUTTMANN.