

No. 693,345.

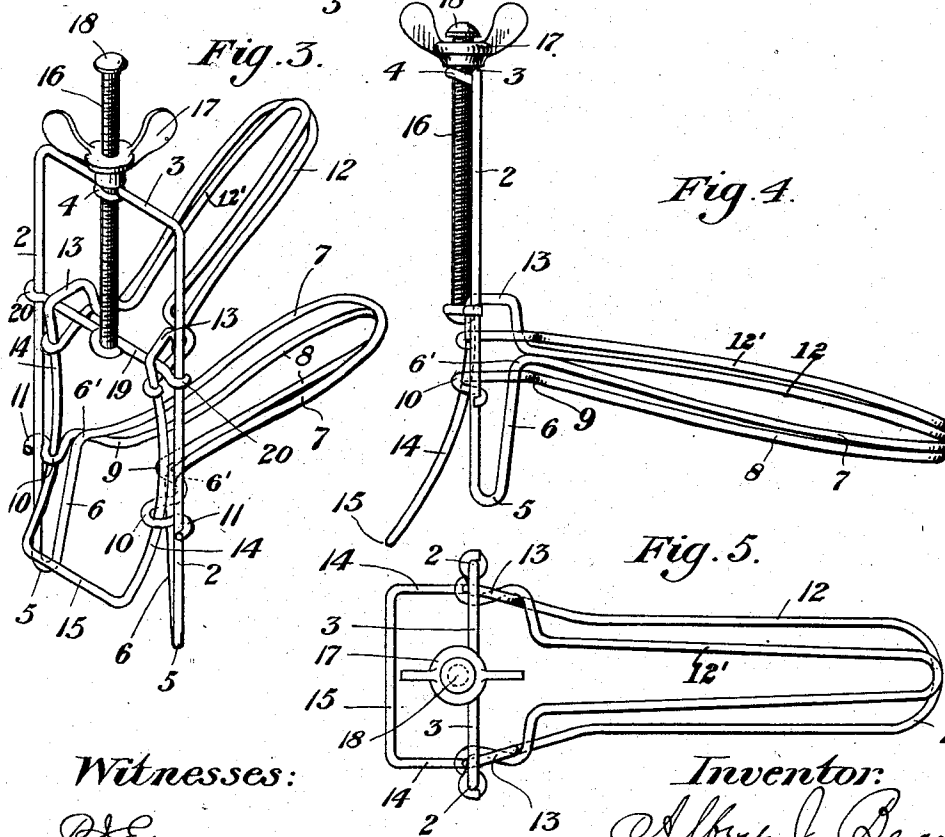
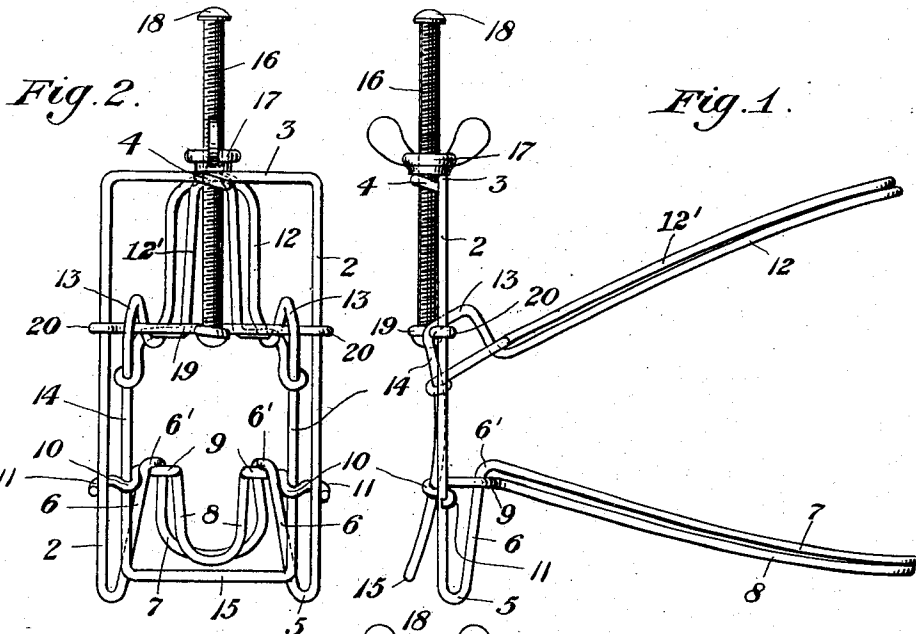
Patented Feb. 11, 1902.

A. J. BEARER.
VAGINAL SPECULUM.

(Application filed Mar. 26, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:

J. Edwards

R. H. Jayman

Inventor:

Albert J. Bearer
by *C. M. Clarke*
his Attorney

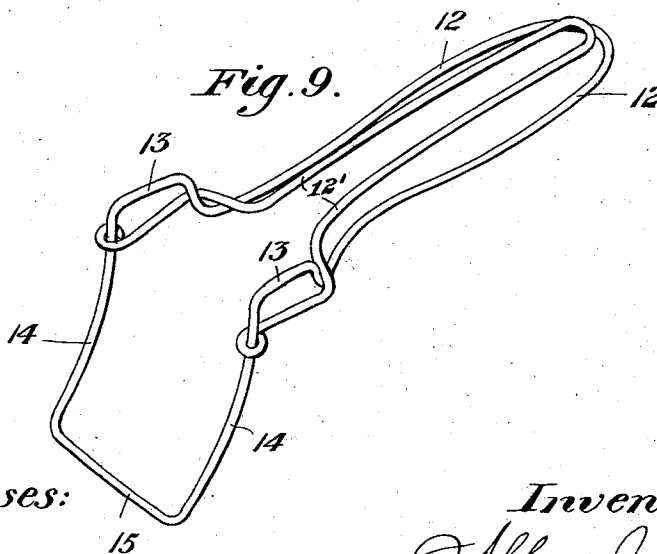
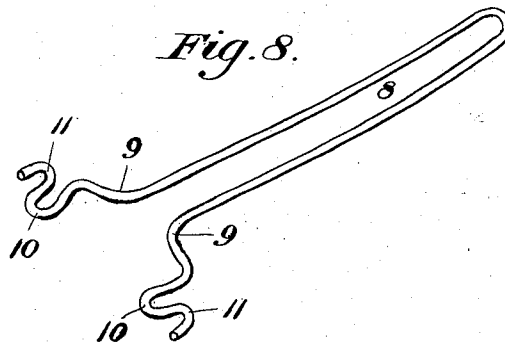
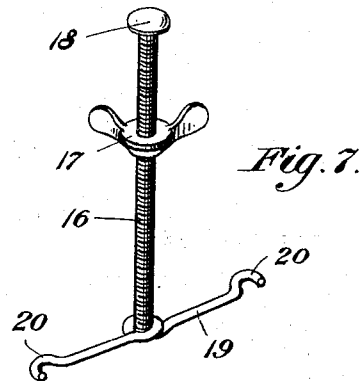
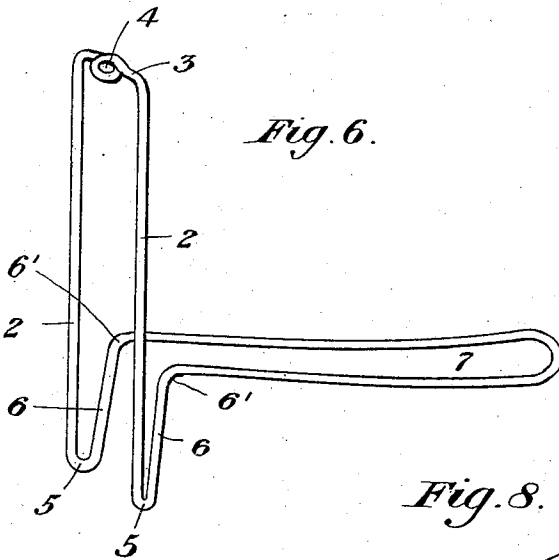
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

ALBERT JOHN BEARER, OF NEW KENSINGTON, PENNSYLVANIA, ASSIGNOR
TO CHARLES A. SCHILLING, OF PITTSBURG, PENNSYLVANIA.

VAGINAL SPECULUM.

SPECIFICATION forming part of Letters Patent No. 693,345, dated February 11, 1902.

Application filed March 26, 1901. Serial No. 52,941. (No model.)

To all whom it may concern:

Be it known that I, ALBERT JOHN BEARER, a citizen of the United States of America, and a resident of New Kensington, county of Westmoreland, State of Pennsylvania, have invented certain new and useful Improvements in Vaginal Speculums, of which the following is a specification, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of my invention in side elevation, the jaws or blades being shown extended. Fig. 2 is a front elevation corresponding to the position of the parts shown in Fig. 1. Fig. 3 illustrates the device in perspective. Fig. 4 is a view similar to Fig. 1, but shows the jaws closed. Fig. 5 is a plan view. Fig. 6 is a detail view in perspective of one of the integral parts of the device constituting a portion of the front framework and of the lower jaw. Fig. 7 is a similar view of the adjusting-screw device with its cross-arm and nut. Fig. 8 is a detail view in perspective of the other portion of the lower jaw, which when connected with the portion shown in Fig. 6 constitutes said lower jaw. Fig. 9 is a detail view in perspective of the upper jaw, the front portion of which constitutes a part of the front framework.

My invention relates to speculums; and it consists in a device composed of wire which is preferably made of German silver or other non-corrosive metal bent into the form of the different separate members composing the instrument and coacting with each other when assembled, as shown in the drawings and as hereinafter described. Generally the instrument consists of two jaws, upper and lower, and means for opening and closing the same. The parts are made so as to readily be detached, thus facilitating the operation of cleaning, and when assembled are capable of being used in the manner for which the instrument is designed, so as to operate in the way usual with such instruments, while providing free space between the wire members, giving ample opportunity for observation by the operator.

Referring now to the drawings, the main frame of the instrument consists of front parallel wires 2 2, having a top cross portion 3,

provided with a central loop 4, which constitutes a bearing for the adjusting-screw. The members 2 are turned at the lower end of the frame backwardly and upwardly, as at 5 6, brought inwardly to a convenient width for the shank of the lower jaw, and then extended outwardly beyond the frame portion, being formed into the loop 7, curved outwardly, and shaped in proper proportions to suit the objects in view. The other portion of the lower jaw consists of a similar loop portion 8, somewhat narrower than the loop 7, of substantially the same length, the side wires of which are turned outwardly at 9 9, which portion bears under the curved corners 6' of the main lower jaw member 7, and the wires are then turned forwardly, forming loops 10 10, the purpose of which will be hereinafter described, then backwardly, forming reverse loops 11, which fit around the vertical wire members 2, as clearly shown, by which means this lower member of the lower jaw is maintained in position.

The upper jaw is composed of a main continuous wire member formed in a loop 12 of proper shape and curvature to operate in conformity with the lower jaw, as described, the wire of such loop 12 being carried forward and turned upwardly, as at 13, and then downwardly, providing parallel members 14, which curve forwardly, as shown, and which are joined by the lower horizontal member 15.

12' is the secondary member of the upper jaw and rests on the loop 12, being secured by eyes passing around the members 14.

The vertical parallel members 14 are engaged by the loops 10 of the lower member of the lower jaw and have by such loop engagement a vertical sliding adjustment. It will be noted that the width of the frame formed by the members 14 is of a size proportionately less than the width between the members 2, whereby such portion 14 fits in between such frame members 2, engaging the loops 10, and when thus assembled leaves a free open space between for observation of the interior toward the ends of the jaws.

16 is an adjusting-screw passing through the loop 4, provided with a threaded nut 17 and a button 18 at its upper end to prevent loss of such nut, and on the lower end of said

adjusting-screw is a cross-bar 19, which passes through the loops formed at 13, between the upper members 12 and 12', the cross-bar 19 terminating in loops 20, which embrace the vertical frame members 2. As thus constructed when the nut 17 is turned downwardly it has the double effect of raising the upper jaw by means of the engagement of the bar 19 with loops 13 and at the same time forcing the lower jaw, as well as the lower members 8, downwardly by means of the pressure of the nut against the loop 4. By this means when the nut is screwed toward the cross-bar 19 such cross-bar and loop 13 are drawn toward the cross portion 3 of the frame-wire and such cross portion, and consequently the entire lower jaw, is forced in the opposite direction, thus effectually separating the two jaws from each other. The function of the outwardly-curved arms 14 is to draw the end of the upper jaw upwardly at a greater angle as the jaw is raised, as is clearly shown in Figs. 1 and 3, such action being caused by the front of the arms 14 binding against the loops 10 as the jaws are separated, and such movement of the outer end of the jaw is one of the desirable objects which is secured by my construction. Upon reversing the screw the jaws collapse and come together in the form shown in Fig. 4, and such operation is very simply and quickly made.

By reason of the construction shown the various interacting parts of the device are easily separated from each other, as shown in Figs. 6 to 9, inclusive, and are as easily assembled for use in the manner which I have described.

The simplicity and ease of operation, the advantages obtained, and the facility with which the instrument may be antiseptically cleansed will commend it to all users of this class of devices, and while the form I have shown is well adapted to the purposes in view it will be understood that the construction may be varied by the skilled mechanic as to its details without departing from my invention as embodied in the following claims.

I claim—

1. A vaginal speculum composed of wire, consisting of separate interfitting and interacting looped jaw members, with an adjusting-screw mounted in one of the members and provided with a cross-bar adapted to engage and to move both of the members, substantially as set forth.

2. A vaginal speculum composed of wire, consisting of separate upper and lower interfitting and interacting looped jaw members, one of such members having curved guiding-arms interfitting with the other member whereby the outer ends of the jaws are caused to separate in a greater degree than inner ends, and means for adjusting the jaws toward and from each other, substantially as set forth.

3. A vaginal speculum composed of wire consisting of a lower jaw portion provided with a vertical frame having an upper bearing for an adjusting-screw, an upper jaw member having a frame portion interfitting and interacting with such lower jaw and frame, and an adjusting-screw passing through the bearing in the frame, provided with a nut and having a cross-bar engagement with the interfitting frame portion of the jaw, substantially as set forth.

4. A vaginal speculum composed of wire consisting of a lower jaw portion provided with a vertical frame having an upper bearing for an adjusting-screw, an upper jaw member having a downwardly-extending outwardly-curved frame portion interfitting and interacting with such lower jaw and frame, and an adjusting-screw passing through the bearing in the frame, provided with a nut and having a cross-bar engagement with the interfitting frame portion of the jaw, substantially as set forth.

Signed at New Kensington, Pennsylvania, this 7th day of February, 1901.

ALBERT JOHN BEARER.

Witnesses:

E. J. KOESSLER,
JEROME SULLIVAN.