S. G. DORR.

Vaginal Speculum.

No. 208,227. Patented Sept. 24, 1878.

Fig. 1

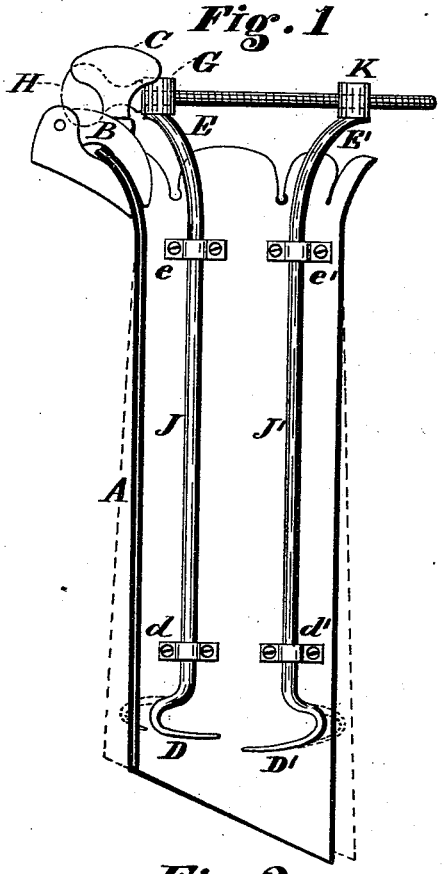
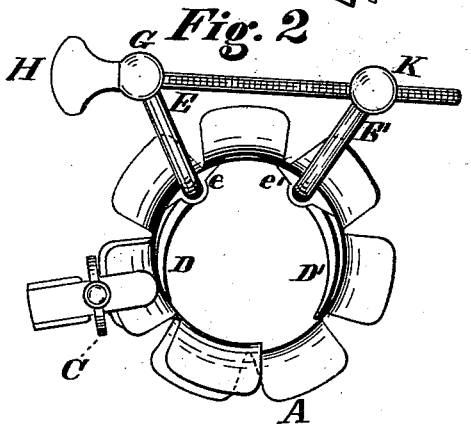


Fig. 2



Witnesses.

James G. Lewis

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SAMUEL G. DORR, OF BUFFALO, NEW YORK.

IMPROVEMENT IN VAGINAL SPECULUMS.

Specification forming part of Letters Patent No. **208,227**, dated September 24, 1878; application filed March 9, 1878.

To all whom it may concern:

Be it known that I, SAMUEL G. DORR, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Vaginal Speculums, of which the following is a specification:

This invention relates to that form of speculum which is capable of expansion after its introduction into the vagina, the object being to bring the mouth of the uterus more plainly into view and render it more accessible to treatment.

It consists in a tube formed from a sheet of some rigid but elastic material rolled into the form of a scroll or volute, the edges thereof overlapping for a considerable distance, and being left free to slide upon each other, so as to admit of a considerable alteration in the size of the tube so formed.

It also consists in the combination, with the said tube, of a clamp, whereby the overlapping portions of said tube may be securely fastened together at its outer end, thus fixing and retaining the diameter of the tube at this part at any size desired.

It also consists in the combination, with the said tube, of a device for expanding the inner end of said tube after it shall have been introduced into the vagina.

In the accompanying drawing, Figure 1 represents a longitudinal section of my improved speculum, and Fig. 2 an end view of the same.

It will be seen that the tubular portion or shell of the speculum is formed like a scroll, the edges of the sheet from which it is formed being shown as overlapping each other for about one-third of its circumference. This method of construction admits of the expansion of the tube by proper mechanism, as shown in dotted lines in Fig. 1.

This tube may be constructed of any metal having a proper degree of resilience or spring; but I prefer to make it of hard rubber, as it has as much if not more resilience as any metal likely to be employed for the purpose, and, in addition, is not likely to be acted upon by any of the reagents usually employed in the treatment of uterine diseases.

The outer end of the tube A is cut at intervals, and flared, so that it simulates the ordinary tubular speculum in form. Upon this flared portion, and at that part of the circumference where the edges of the sheet forming the tube overlap, will be seen the clamp B, operated by the thumb-screw C, the object of which is to hold the parts to which it is attached in contact and retain the diameter of this end of the tube at the size to which it may be adjusted.

Two shafts, J J′, are fastened upon the inner side of the tube A, opposite its overlapping portion, by means of the bearings *d e d′ e′*, in which they are capable of partial rotation. The inner ends of these shafts terminate in the toes D D′, respectively, which stand at right angles to the body of the shafts, and are of a curved form, made to fit the sides of the tube A as it is when fully expanded. These toes are not in the same plane, but one is a little in advance of the other, so that they may be crossed without interference, the object being to allow the compression of the inner end of the tube A into as small a compass as possible to facilitate its introduction.

The outer ends of the shafts J J′ are bent at right angles in a direction opposite to the arms D D′, thus forming the arms E E′. It is evident that it is only necessary to draw together the arms E E′ to separate the arms D D′, which in turn will press upon and expand the sides of the tube A.

To operate these arms as above described, I have shown the thumb-screw H, which passes through the swivel G, and operates in the swivel K, as in a nut. These swivels being attached to the arms E E′, respectively, it is evident that the rotation of the thumb-screw H will cause the dilation or closure of the inner end of the tube A.

Having thus described the construction and operation of my improved speculum, I claim as my invention and desire to secure by Letters Patent—

1. The vaginal speculum formed by coiling a sheet of hard rubber, or other equivalent rigid and elastic material, into a scroll or tube, with free overlapping edges, substantially as described.

2. The combination of the scroll or tube A with the clamp B, or its equivalent, substantially as described.

3. The combination of the scroll or tube A with the shafts J J′, the arms D D′ E E′, and the thumb-screw H, or their equivalents, substantially as described.

SAMUEL G. DORR.

Witnesses:
WILLIAM GRAM, Jr.,
CHARLES O. ROTHER.