

(Model.)

C. C. FREDIGKÉ.
VAGINAL TAMPON.

No. 435,491.

Patented Sept. 2, 1890.

Fig. 1.

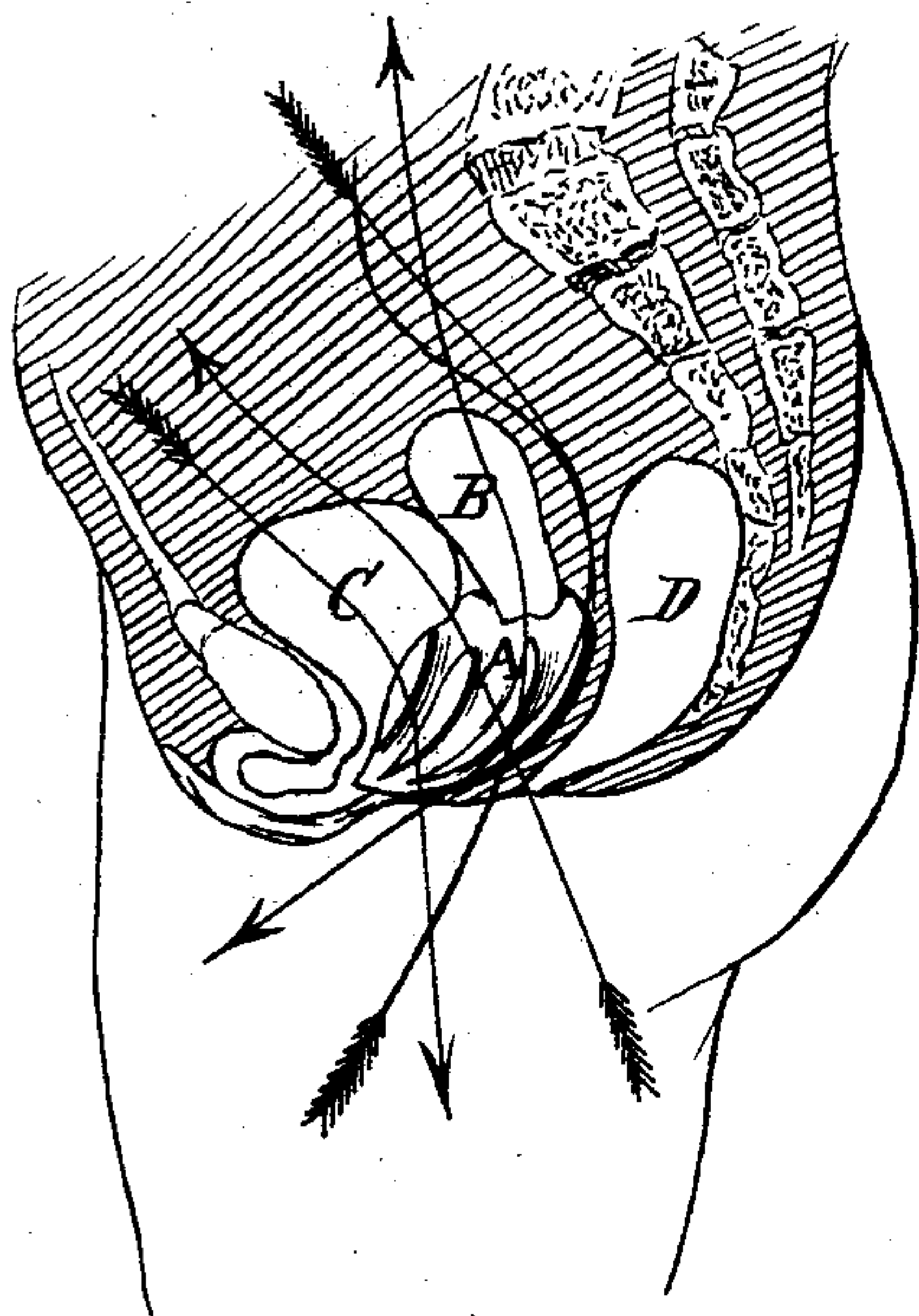


Fig. 2.

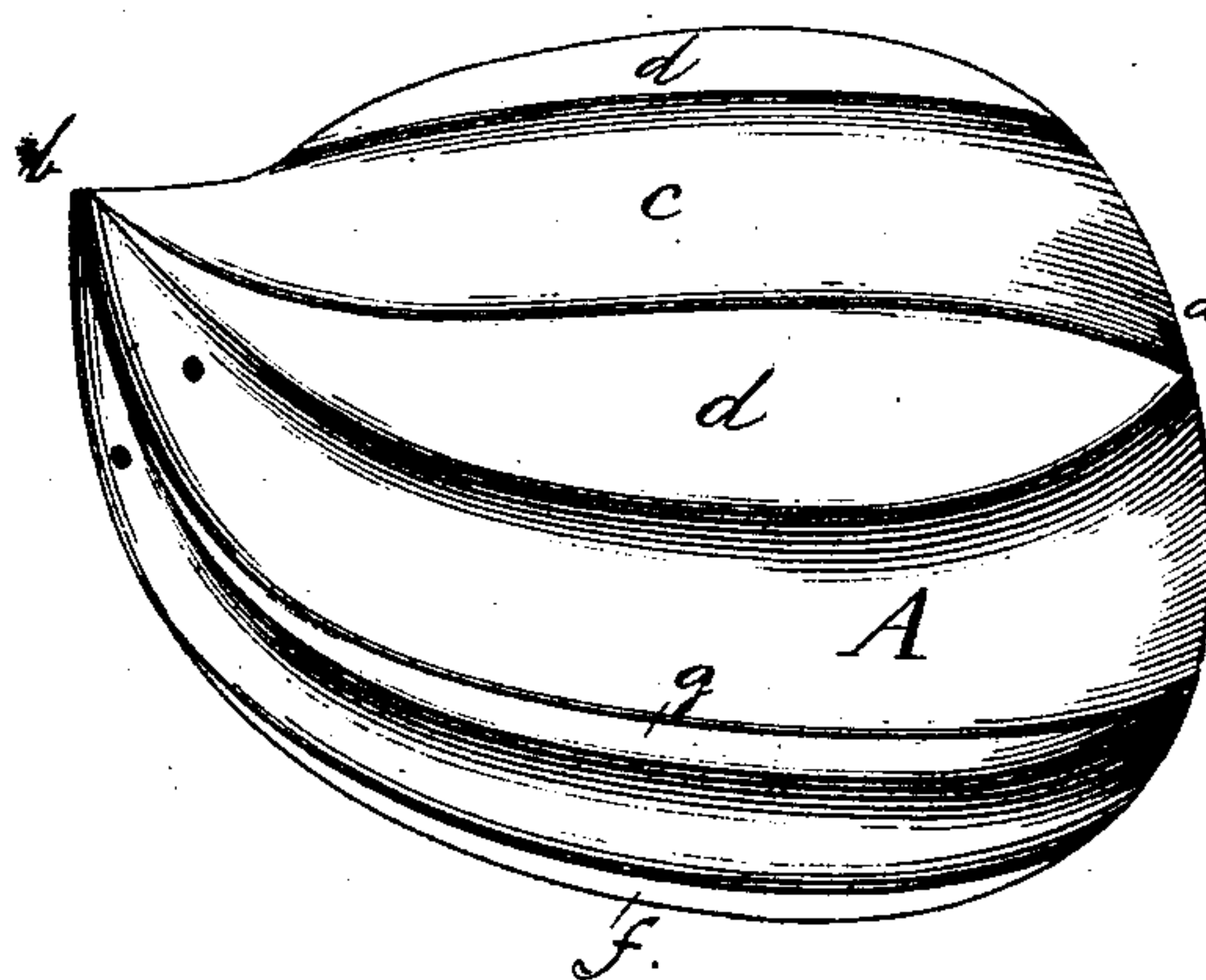


Fig. 3.

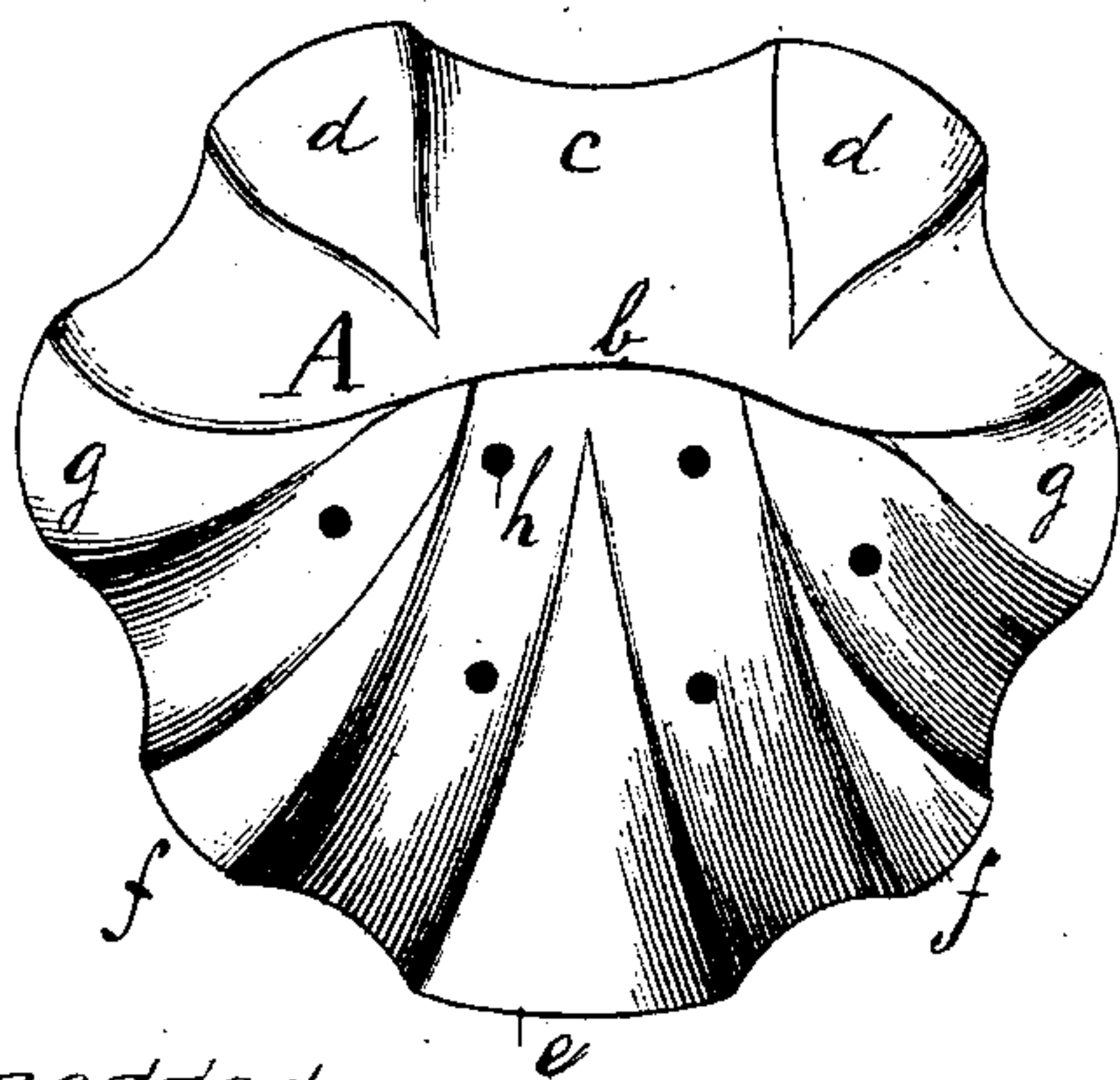
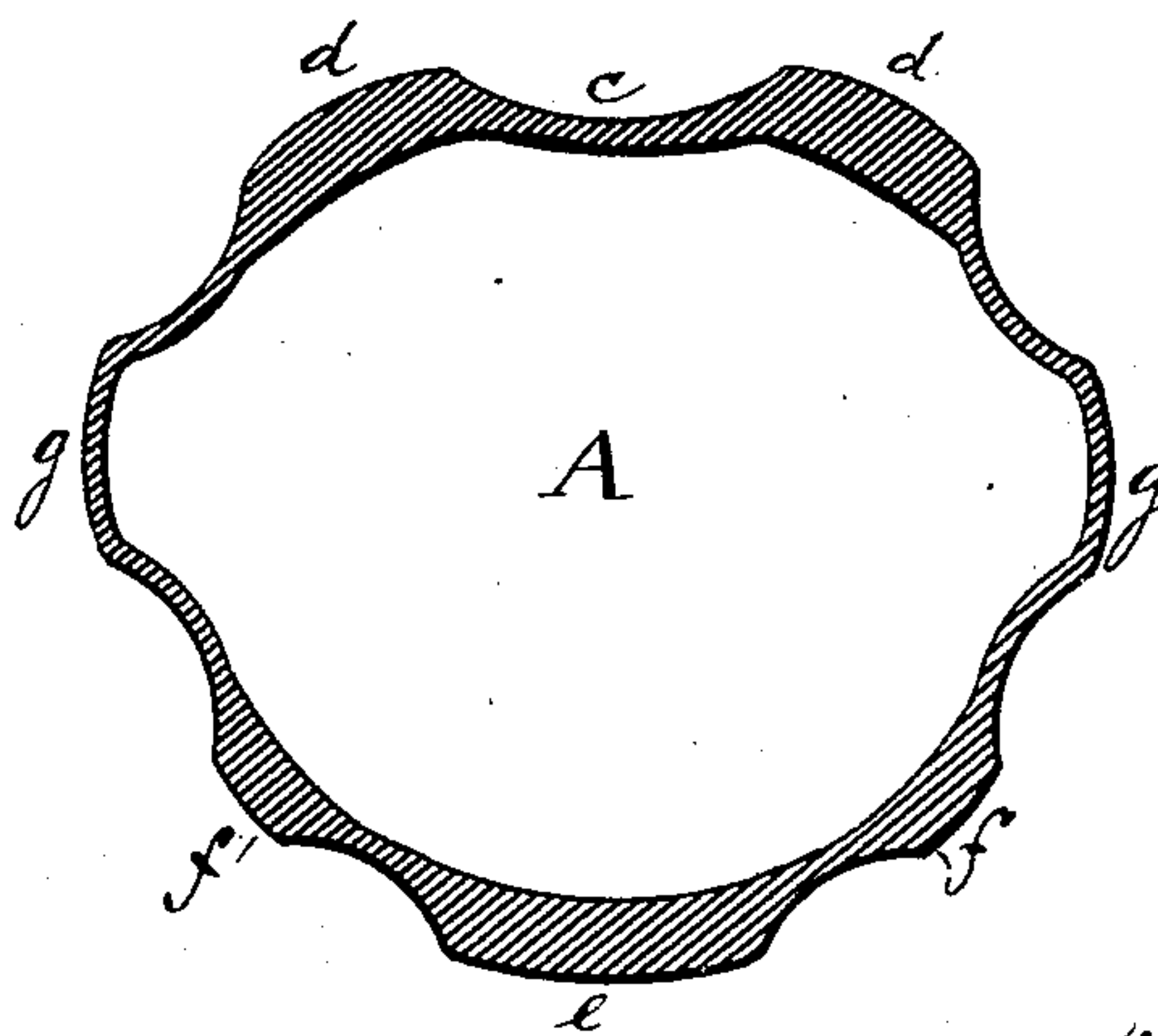


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES C. FREDIGKÉ, OF CHICAGO, ILLINOIS.

VAGINAL TAMPON.

SPECIFICATION forming part of Letters Patent No. 435,491, dated September 2, 1890.

Application filed May 29, 1890. Serial No. 353,529. (Model.)

To all whom it may concern:

Be it known that I, CHARLES C. FREDIGKÉ, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Vaginal Tampons, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This my invention relates to vaginal tampons for supporting the womb and its adnexa; and it has for its object to provide a tampon for such purpose that, after once inserted into the vagina, will be self-adjusting, and while supporting the womb will accom-
15 modate itself to the surrounding organs without interfering with the functions thereof during all positions and performances the female body may be subjected to, and that, after once inserted, will not rotate, shift, or sink or be expelled from any cause excepting by manual exertion; and with these objects in view my invention consists of an elastic pear-shaped hollow body provided with a
20 number of longitudinal ribs and corrugations, which ribs are made partly more stiff and partly more elastic, according to the size and shape of the cavity of the vagina and the degree of pressure desirable to be exerted by the expanding force of the tampon after inserting while in a compressed condition, at the same time yielding to lateral compression during the contraction of the surrounding
25 organs from any cause, and under all conditions providing a concaved bearing for the mouth of the womb, all as will be more fully hereinafter described and specifically claimed.

30 In the accompanying drawings, Figure 1 represents a sectional view of the female pelvic organs, the body being in an erect position, with the bladder and rectum partially distended and with the tampon in position for supporting the womb. Fig. 2 represents a perspective view of my improved tampon; Fig.
35 3, a bottom view, and Fig. 4 a transverse section of the same.

Corresponding letters of reference in the several figures of the drawings designate like parts.

50 A denotes the tampon, being of a shape somewhat like a pear, with a blunt end *a*, and with its opposite end gradually tapering

to an apex *b*, broad from side to side and flattened from front to rear and curving forward. On its anterior side, which is rather flat, the tampon presents a broad concavity, depression, recess, or fossa *c* for the reception of the urethra to protect it from pressure. This surface *c* being transversely concave, is longitudinally convex toward end
55 *a* and concave toward end *b*, and is flanked on each side by a longitudinal rib *d* to prevent prolapse of the anterior wall of the vagina and to support the bladder, which ribs *d* are called the "urethro-vesical ribs." On its
60 posterior side the tampon has a convexity characterized by three ribs—one larger middle rib *e* and two smaller ones *f*—termed the "rectal ribs," which prevent prolapse of the posterior walls of the vagina and are intended
65 for the support of the womb.

The sides of the tampon are equal and are characterized by two ribs *g*—one on each side—termed the "ovarian ribs." All the ribs gradually taper in width toward both ends
70 *a* and *b*. Near the inferior end or apex *b* the posterior side of the tampon is perforated by a series of apertures *h*, and when the instrument is in position within the vagina the inferior quarter of this convex posterior surface is continuous with the sacro-coccygeal
75 curve. This instrument, as has been shown, thus presents a surface with seven ribs and seven corresponding depressions, of which the posterior middle rectal rib *e* is the longest and strongest. Then come the next two longest
80 but weakest ribs *f*, which are also narrower than all the others. These are succeeded from the rear toward the front by the ovarian ribs *g*, which in their turn are succeeded by the urethro-vesical ribs *c* and *d*, which are the
85 shortest.

These tampons I prefer to make of the best quality of india-rubber vulcanized, with the ribs *d*, *e*, *f*, and *g* for obtaining the desired
90 stiffness or elasticity where required, to be either solid or hollowed out from the inside. In the drawings I have thus shown the ribs *d*, *e*, and *f* solid, and the ribs *g* hollowed out; but I desire to be held neither to the exact
95 number of ribs shown nor to what ribs, if any or all, to be formed solid or hollow, and these ribs may be changed as to their form, size, depth, or thickness, their relation to each

other, or their length to suit various cases and purposes. These ribs all originate in the apex *b* and disappear on the verge of the top surface, and are the widest at about one-third
 5 their entire length from end *a*. The antero-posterior diameter of the instrument being less than the transverse, the instrument is flattened from front to rear. Thus it is molded unlike all others, after the shape which the
 10 vaginal cavity assumes under atmospheric pressure while the body is in the knee-chest position, with such modifications of its size and surface as are dictated by the pathologic conditions to be met. Hence it may be placed
 15 in position and adjusted by the patients themselves, after which it will not rotate, shift, or sink, and if a more special support to the womb and its adnexa is required, then its anterior surface may be lengthened at the ex-
 20 pense of the posterior, and the same with the transverse surfaces, and so, also, may the surface *a* be changed, for instance, so as to form a concavity, or it may be perforated by one or more apertures of various shapes or
 25 sizes.

The diameters of the instrument may be reduced to one-half by lateral compression, producing a degree of expanding pressure which is not often required, and it suffices for the
 30 majority of cases to apply an instrument the antero-posterior diameter of which is one-quarter of an inch larger than the corresponding diameter of the cavity to be fitted. The air having free ingress and egress, pressure
 35 from the top and front downward and backward shortens the anterior and lengthens the posterior surface. Close contact, in spite of respiration, coughing, or straining, is thus maintained, extending over four-fifths of the
 40 entire surface of the vaginal tract, all of which is not the case with any device thus far manufactured. The urethro-vesical ribs *d*, as well as the ovarian ribs *g*, have their fulcrum in the apex *b* of the instrument when
 45 it is in position, while the instrument maintains itself by its close impact upon the posterior wall of the vagina for its entire length from the posterior fornix to the fourchette and by its expanding pressure directed for-
 50 ward, upward, and laterally, thus narrowing the orifice of the vagina and preventing involuntary expulsion. Even with a laceration

of the perinæum to and through the sphincter ani it can only be expelled by a strong effort.

When necessary, instruments can be made
 55 exerting a degree of pressure amounting to a pound or more per square inch of surface and requiring the combined strength of the thumb and index and middle fingers of a powerful hand for their application.

This instrument is of the proper size, when after introduction, in the knee-chest position, its apex barely touches the urethral wall of the vagina about one-quarter inch superior to the meatus.

The surface of the top of the instrument, as well as its sides, may be perforated by apertures of various sizes, shapes, and number for various reasons to suit various indica-
 70 tions.

This instrument, instead of being made of rubber, may also be made of other suitable material, and the ribs may be composed of any substance, such as gilded spiral steel wire or wire of aluminium.

In Fig. 1 of the drawings, A denotes the tampon, and B the womb, the mouth of which is supported on such tampon. C is the bladder, and D the rectum, both partially dis-
 80 tended. The arrows shown to be on a down course indicate the direction of pressure, as modified by the sacro-coccygeal curve and floor of the pelvis, exerted by the abdominal viscera upon the pelvis organs. The arrows shown to be on an up course indicate the di-
 85 rection of the resilient counter-pressure exerted by the anterior and superior surfaces of the pneumatic tampon, its convex posterior surface resting on the posterior wall of the vagina and its lower forward end closing
 90 the pelvic outlet.

What I claim is—

The elastic pear-shaped hollow vaginal tampon formed longitudinally with alternate ribs and corrugations and perforated at its
 95 pointed end for the ingress and egress of air, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES C. FREDIGKÉ.

Witnesses:

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OTTO LUEBKERT.