

Feb. 24, 1953

E. C. BROWN

2,629,381

TAMPON

Filed Aug. 2, 1951

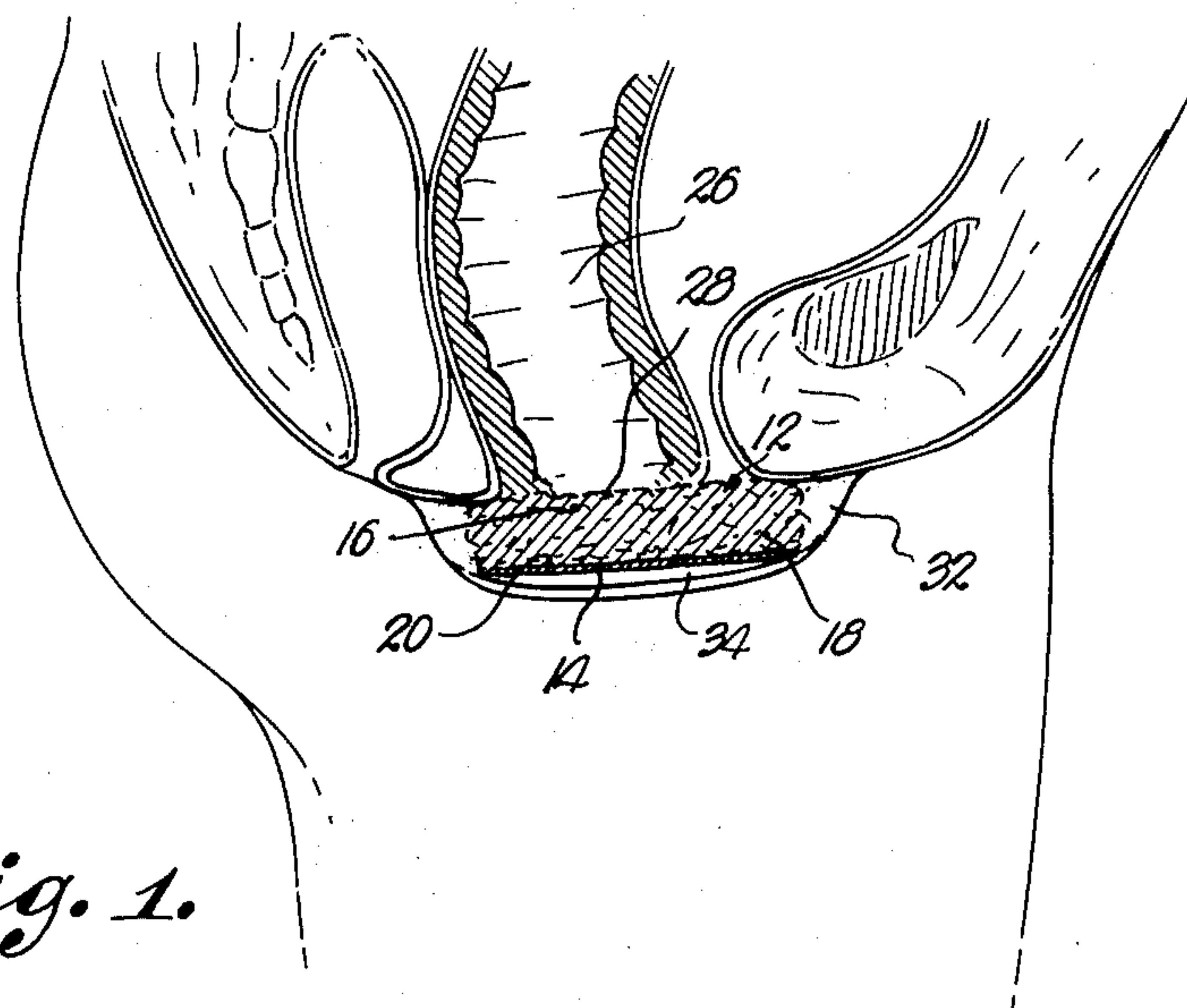


Fig. 1.

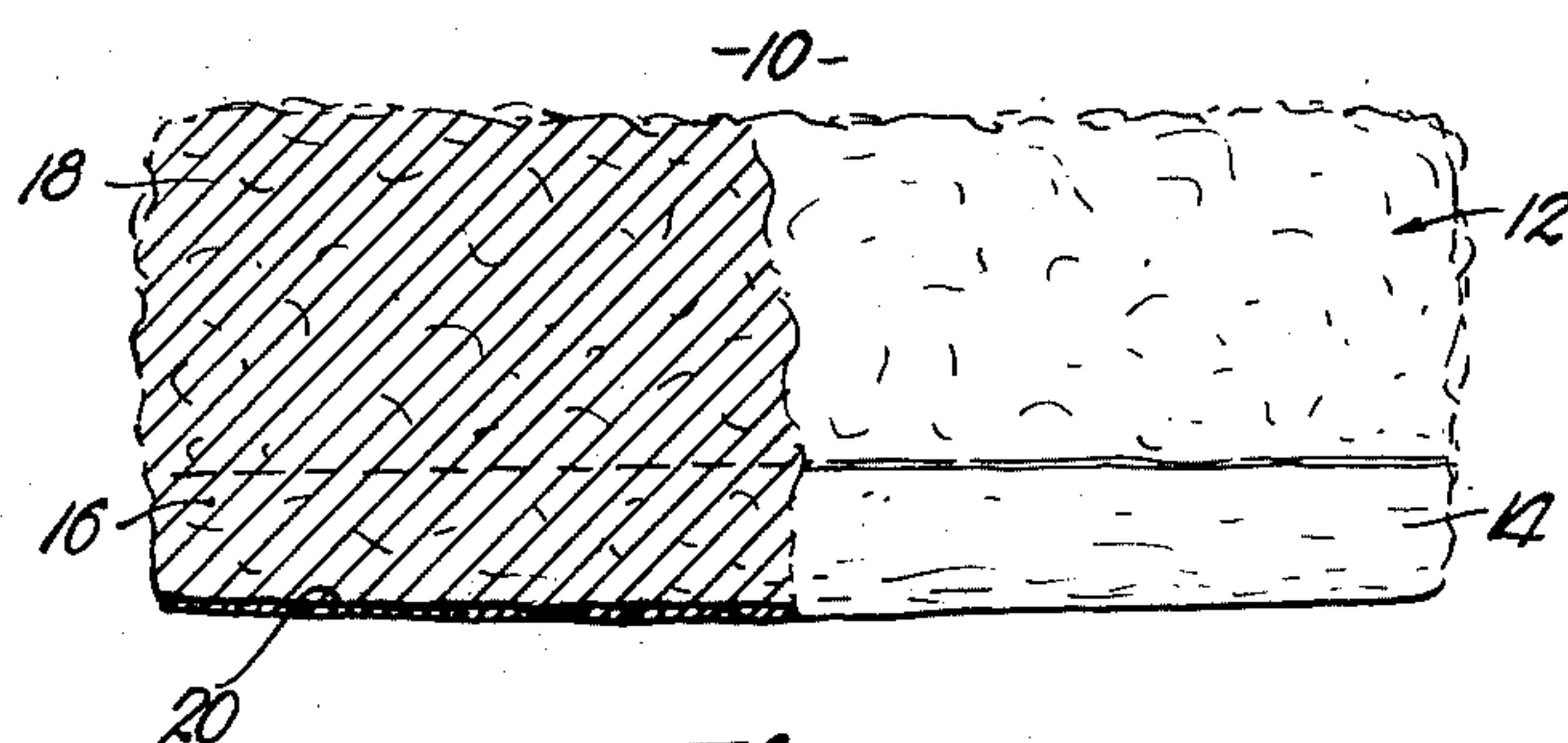


Fig. 2.

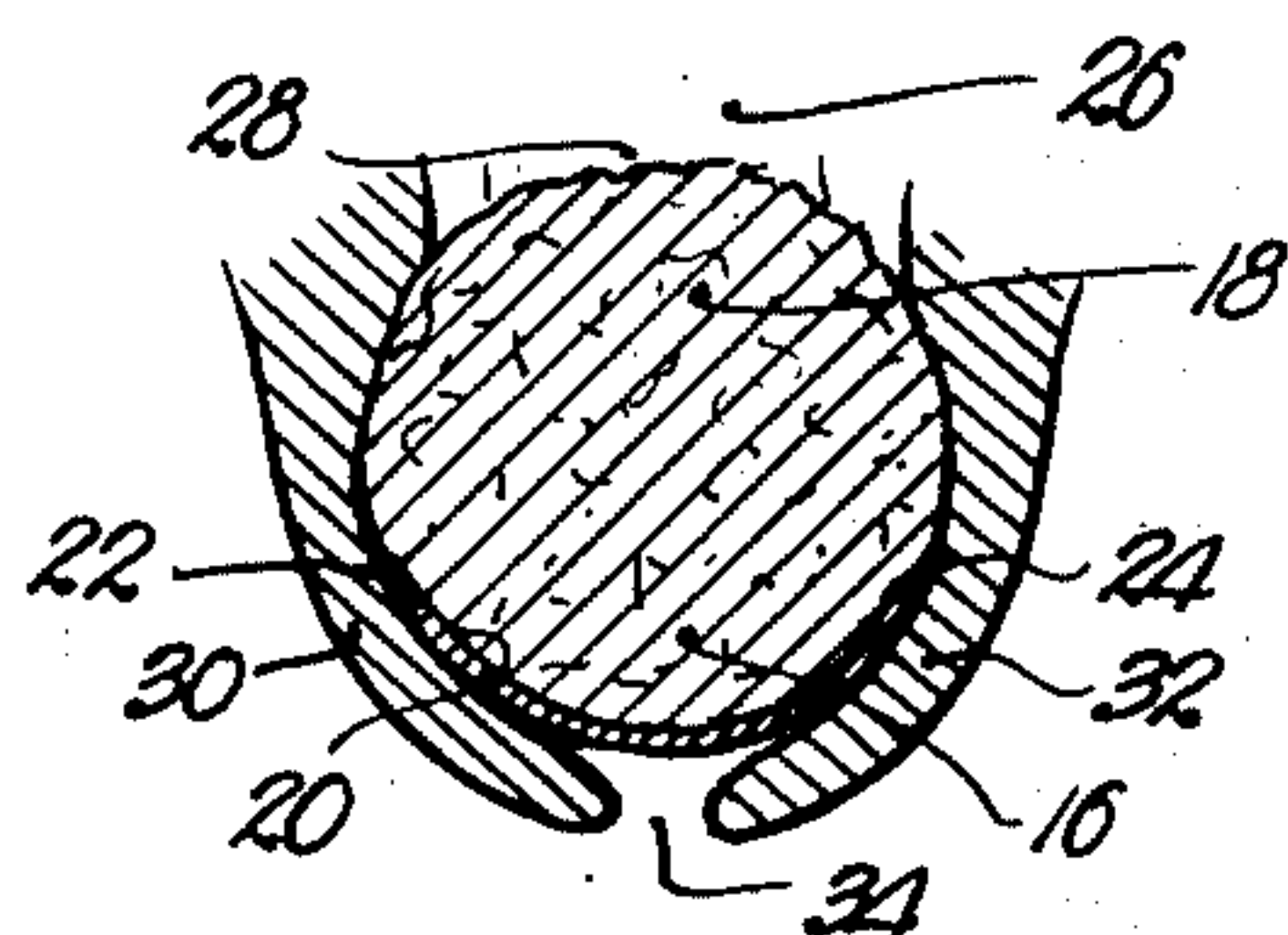


Fig. 3.

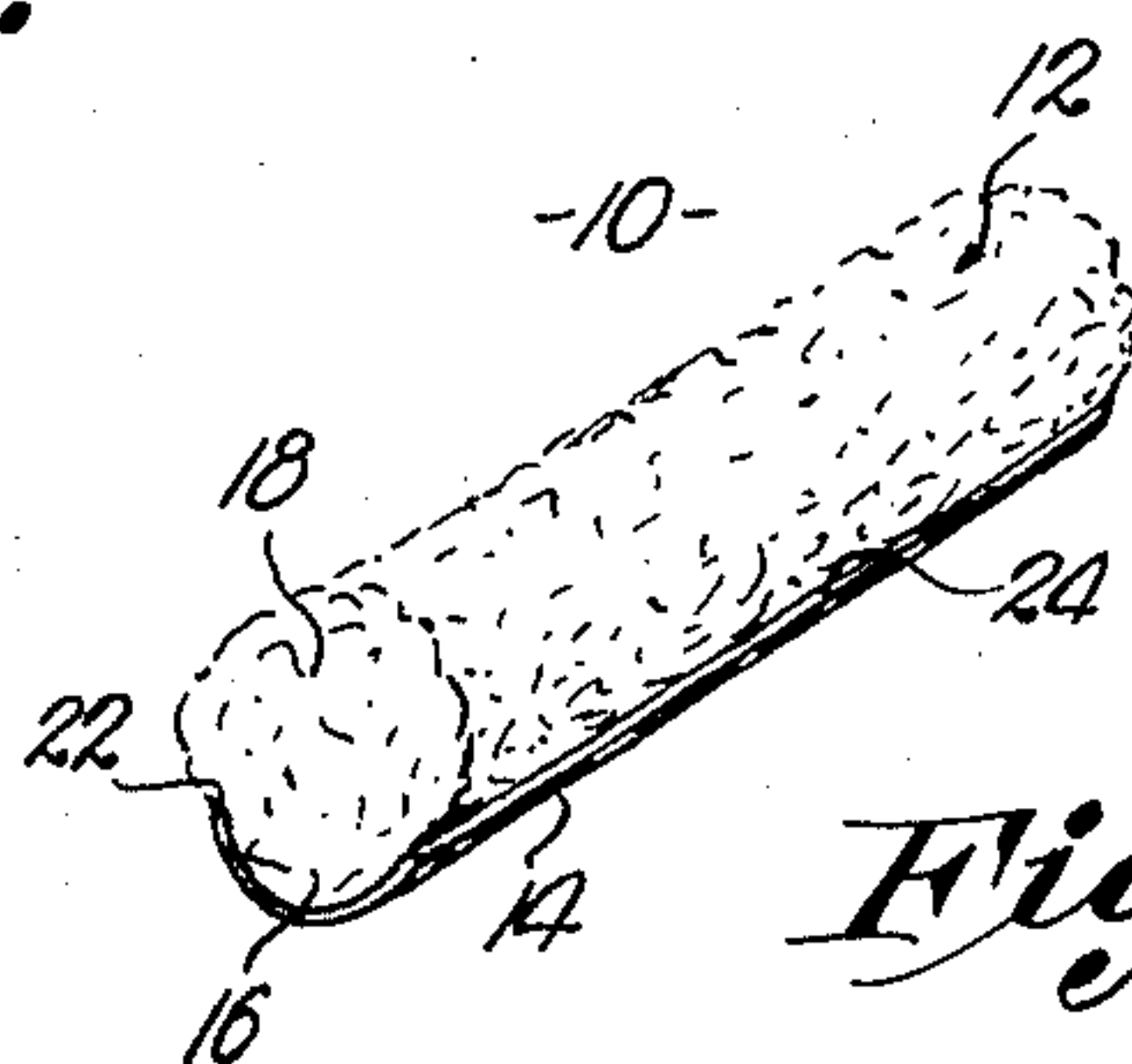


Fig. 4.

INVENTOR.
Ethel C. Brown
BY *E. C. Brown*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,629,381

TAMPON

Ethel C. Brown, Mission, Kans.

Application August 2, 1951, Serial No. 239,973

6 Claims. (Cl. 128—290)

1

This invention relates to a catamenial appliance in the nature of a tampon adapted for positioning in transverse relationship to the vagina orifice to cover the same and including an elongated body having as a part thereof, a pad of absorbent material for engaging the folds of integument forming the said orifice when the appliance is in place and adapted for support solely by the labia of the vulva.

It is the most important object of the present invention to provide a tampon of the aforementioned character having a coating as a part thereof for supplying the necessary body to the otherwise highly flexible pad as an aid in holding the appliance in place, positioned as above described, and between the labia of the vulva.

Another important object of this invention is to provide in a tampon, an elongated body that includes a pad of absorbent material, and a trough-like coating for a portion of the pad, the coating being imperforate and impervious to the flow of menstrual discharge collected by the overlying pad, thereby affording a barrier to leakage from between the said labia.

Another important object of this invention is to provide a coating that is arcuate in cross-section and having a smaller radius than that of the initially, substantially cylindrical pad to which the coating is applied, whereby the mass of loosely arranged material forming the pad is partially compressed transversely by the coating, and therefore, deformed from the initial cross-sectional form.

A further object of this invention is to provide a trough for the pad of a menstrual tampon that, in addition to having the aforesaid novel characteristics, is also sufficiently pliable to assure coverage of the vaginal orifice at all times by intimate engagement with the folds of integument and while the user of the appliance assumes different positions.

Other objects include details of construction, all of which will be made clear or become apparent as the following specification progresses, reference being had to the accompanying drawing, wherein:

Figure 1 is a cross-sectional view through a tampon made pursuant to the present invention illustrating the same in position covering the vagina orifice.

Fig. 2 is an enlarged, side elevational view of the tampon, parts being broken away and in section for clearness.

Fig. 3 is a transverse, cross-sectional view through the tampon and through the vulva with the tampon in place therewithin; and

2

Fig. 4 is a perspective view of the tampon itself.

Elongated, catamenial tampons of absorbent material have heretofore been provided, but for the most part, the same have been designed for a contemplated use by insertion into the vaginal cavity with the expectation that the absorbent material shall receive the menstrual discharge and thereupon be replaced after saturation. Such appliances have the inherent disadvantage of being incapable of preventing escape of a portion of the discharge from the vagina, thereby causing discomfort and soiling of the clothing of the user. Furthermore, such appliances when so inserted, are uncomfortable, difficult and oftentimes painful to apply and remove and tend to cause injury to the delicate membranes forming the vagina walls.

As will hereinafter appear, the tampon of the present invention is not an insertable appliance, so far as the vaginal cavity is concerned at least, but is carefully designed for disposition entirely to the outside of the vagina in intersecting relationship to the orifice thereof and only between the lips or labia of the external female genital organs. In addition to covering the vagina, the pad of the appliance is adapted to receive the menstrual discharge and, through the medium of a novel trough attached to the pad, there is presented a barrier to leakage of any menstrual discharge that may escape the absorbent pad, particularly after the same becomes saturated.

The tampon hereof is clearly illustrated in the drawing and includes an elongated body broadly designated by the numeral 10, and including a pad 12 and a coating 14. The particular composition of the pad 12 forms no part of the present invention since the same have heretofore been provided for similar purposes and pads of like composition are readily available on the open market.

It is contemplated hereby that the pad 12 be made from a suitable, highly absorbent cotton-like or other fibrous material, arranged in a relatively loose mass. Pad 12 is preferably cylindrical in cross-section prior to application of coating 14.

As is clear in the drawing, the elongated coating 14 is arcuate in cross-section, somewhat less than a complete semi-circle and of course, is produced from a suitable substance having more body than the pad 12. In this respect it is appreciated that pad 12 of itself has little body and is, therefore, rather flimsy and bendable. The material forming the coating 14 should be selected therefore, to add body to the pad 12 and while

3

the entire device 10 should still be readily bendable even after attachment of the coating 14 to the pad 12, body 10 will normally remain in the extended condition shown in Figs. 2 and 4 of the drawing. It is contemplated that a synthetic material be utilized for coating 14 and such material may include many of the well known plastics now available on the market. The necessity of a high degree of pliability, particularly longitudinally in the coating 14, will hereafter become more clear.

In addition to the foregoing characteristics of the material forming the coating 14, such material should be impervious to the flow of menstrual discharge when the tampon is placed in use and accordingly, the coating 14 is imperforate throughout the length thereof.

Further, as is clear in the drawing, the pad 12 and the coating 14, are preferably coextensive in length. The radius of the coating 14 is less than the radius of the initially cylindrical pad 12 and accordingly, when the pad 12 and coating 14 are joined in the manner shown by Fig. 4 of the drawing, a portion 16 of the pad 12 will be transversely compressed, while portion 18 of pad 12 remains in the expanded, relatively loose condition shown most clearly by Fig. 4 of the drawing. When the pad 12 is thus joined with the coating 14 and secured rigidly thereto through the medium of a suitable adhesive 20, the two straight, longitudinal edges 22 and 24 of the coating 14 will engage and be in direct line contact with the pad 12 throughout the length of the latter.

Obviously adhesive 20 or other means of affixation will become necessary only if the coating 14 comprises an initially composite or homogeneous body or unit of a self-sustaining nature or capable of maintaining a predetermined form such as shown in the drawings. If the material of coating 14 is of a nature necessitating spraying, brushing or other application thereof to pad 12, such as by dipping of pad 12 into a solution having the aforesaid properties of coating 14, then perhaps adhesive or the like may well be eliminated.

Body 10 is placed in use in the manner illustrated by Figs. 1 and 3 of the drawing wherein the female genital organs are clearly illustrated. Vaginal passage or cavity 26 has its orifice 28 completely covered by the pad 12 through direct engagement of the latter with the folds of integument forming the orifice 28, it being noted in Fig. 1 of the drawing that the body 10 is disposed in transverse relationship to the orifice 28 and with the longitudinal axis of the body 10 substantially intersecting the longitudinal axis of the vaginal cavity 26.

It is contemplated that the entire body 10 be enclosed by the external female genital organs and particularly between the labia 30 and 32 of the vulva. As shown in Fig. 3 of the drawing, such labia 30—32 completely surround the body 10 transversely thereof, thereby holding the pad 12 in closing relationship to the orifice 28. Pad 12 is therefore, in a position to receive and absorb the menstrual discharge from cavity 26 and the coating 14 presents a trough that overlaps the opening 34 between the proximal edges of the labia 30—32.

Accordingly, any menstrual discharge that may escape past pad 12, particularly after the same becomes partially or fully saturated, is retained by the trough 14 and not permitted to escape through that portion of opening 34 spanned by trough 14. By virtue of the fact that portion 18

4

of the pad 12 is permitted to maintain its normal extended condition, such portion 18 will engage the inner walls of the labia 30—32, as well as the passage 26 at orifice 28 and normally prevent secretion of the menstrual discharge toward the opening 34, at least until the pad 12 becomes fully saturated, at which time the member 14 operates to prevent leakage as aforesaid.

The interengagement of pad 12 with the inner walls of the vulva, aided by the natural moistness of such walls, serves to cause pad 12 to cling thereto and in place as shown. Pad 12 in no way closes the opening 28 nor extends into cavity 26, but remains in position to receive the discharge without injury or discomfort to the wearer in any way.

Furthermore, as above indicated, because of the degree of pliability of the coating 14, as the user tends to take differing positions, body 10 will automatically maintain the contour necessary to keep orifice 28 completely covered at all times.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. A catamenial tampon comprising an elongated body having a single pad of loosely packed highly absorbent material, and non-elastic reinforcement and stiffening means coated directly on the pad and coextensive in length therewith, said means having a predetermined self-sustaining configuration, rendering the body insertable between the labia of the vulva for sole support thereby with the pad in intersecting, covering relationship to the vagina orifice.
2. A catamenial tampon comprising an elongated body having a pad of highly absorbent material, and a pliable, non-elastic reinforcement and stiffening means coated directly on the pad and coextensive in length therewith, said means having a predetermined self-sustaining configuration, rendering the body insertable between the labia of the vulva for sole support thereby with the pad in intersecting, covering relationship to the vagina orifice, said means being impervious to passage of menstrual discharge therethrough.
3. A catamenial tampon comprising an elongated body having a pad of highly absorbent material, and a non-elastic reinforcement and stiffening means secured directly to the pad and coextensive in length therewith, said means having a predetermined self-sustaining configuration, rendering the body insertable between the labia of the vulva for sole support thereby with the pad in intersecting, covering relationship to the vagina orifice, said means being imperforate and transversely arcuate, presenting a trough-like barrier to the escape from the vulva between said labia of menstrual discharge collected by said pad.
4. A catamenial tampon comprising an elongated body having a pad of highly absorbent material, and coating means secured to the pad and coextensive in length therewith, rendering the body insertable between the labia of the vulva for sole support thereby with the pad in intersecting, covering relationship to the vagina orifice, said coating means being imperforate and transversely arcuate, presenting a self-sustaining, trough-like barrier to the escape from the vulva between said labia of menstrual discharge collected by said pad, the longitudinal edges of said coating means being in line contact with the pad throughout the length thereof, said coating means being sufficiently rigid to partially compress the pad within the confines of the coating means.

5

5. A catamenial tampon comprising an elongated body having a pad of highly absorbent, normally loosely massed material, said pad being initially cylindrical in cross-section; and means secured to the pad and forming a part of said body for rendering the same insertable between the labia of the vulva for sole support and full enclosure thereby, with the pad in intersecting, covering relationship to the vaginal orifice in engagement with the folds of integument forming the same, said means including an elongated, imperforate trough, coextensive in length with the pad, said trough being self-sustaining, impervious to the escape from the vulva between said labia of menstrual discharge collected by said pad, sufficiently pliable to hold the pad in said covering relationship to the vaginal orifice during normal movements of the user of the body and sufficiently rigid to hold the pad against expansion within the trough.

6. A catamenial tampon comprising an elongated body having a pad of highly absorbent, normally loosely massed material, said pad being initially cylindrical in cross-section; means secured to the pad and forming a part of said body for rendering the same insertable between the labia of the vulva for sole support and full en-

6

closure thereby, with the pad in intersecting, covering relationship to the vaginal orifice in engagement with the folds of integument forming the same, said means including an elongated, imperforate, trough-like coating, coextensive in length with the pad, said coating being impervious to the escape from the vulva between said labia of menstrual discharge collected by said pad and sufficiently pliable to hold the pad in said covering relationship to the vaginal orifice during normal movements of the user of the body, said coating having an arcuate, transverse contour and a radius less than the normal radius of the pad for holding a portion of the pad partially compressed transversely thereof; and means for securing the coating to the pad.

ETHEL C. BROWN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,005,298	O'Brien et al. _____	June 18, 1935
2,328,795	Finks _____	Sept. 7, 1943
2,506,238	Rowe _____	May 2, 1950