Great nervous irritation.

LACERATIONS OF THE SOFT PARTS.

Laceration of the Cervix Uteri. Liable to cause Cancer.

Laceration of the cervix is one of the commonest of all gynecological affections, and is the consequence of dilatation of the cervix, whether by the head of the child in labor or by the uterine dilator in the hands of the gynecologist.

The tear occurs in consequence of the refusal of the external os uteri to dilate sufficiently to allow the head of the child to pass, and the result is a rupture which extends a variable distance up into the uterus and into the vault of the vagina along the base of the broad ligaments.

These ruptures are with remarkable uniformity bilateral; occasionally unilateral or stellate.

Deep fissures, unaccompanied by lateral tears, occupying the median line in front or behind, are almost without exception susceptible of some other explanation. Posteriorly, for example, many cases are observed in which the operation of discision, or splitting of the cervix for the relief of dysmenorrhea, had been practised. Anteriorly, a median split is often significant of the surgeon's knife or scissors, used to incise the rigid os, or more often it arises from the use of the obstetric forceps.

The immediate danger arising from these tears is the ready access afforded for the invasion by septic germs of the pelvic connective tissue. This is to be prevented by unusual care during the confinement and puerperium, in avoiding sepsis by cleansing the vagina before labor where there is any purulent discharge, and by maintaining an aseptic condition during the confinement.

If it is necessary to handle the cervix, this should be done with a sterilized rubber stall drawn over the finger. After the

confinement, douches should not be given as a prophylactic, but become necessary when the existence of an infection has declared itself.

It is not proper, in view of our methods of to-day, to attempt the immediate repair of cervical tears. When, however, there is a constant flow of arterial blood, trickling in a small stream from between the labia, and digital examination reveals the presence of cervical laceration, it will be found at times that the hemorrhage proceeds from the rupture of a cervical artery. In such a case an immediate operation must be undertaken. The patient should be brought to the edge of the bed in the dorsal position with the thighs flexed upon the abdomen and the posterior vaginal wall retracted with a Sims speculum. The blue, soft lips of the cervix appear low down in the vagina; they should be grasped by a pair of bullet-forceps, drawn down to one side, and the tear from which the bleeding comes exposed. The operator then passes a suture deeply through the tissue, in such a way as to include the vessel and serve at the same time to approximate the torn lips. Two or three similar sutures below this uppermost one will serve to secure an accurate approximation of the lips throughout. The sutures must not be tied tightly, and no dressing should be applied in the vagina. Such an operation will be almost invariably successful. The sutures may be left in place for six or eight weeks if necessary.

Where an operation is unnecessary for the purpose of controlling hemorrhage, the patient is to be treated on the expectant plan and if no sepsis occur, a spontaneous closure of the laceration will take place.

Some months or some years after a confinement one of three appearances will be observed in cases of laceration of the cervix: First, the cervix presents a normal appearance with a slight or

FIG. 102.

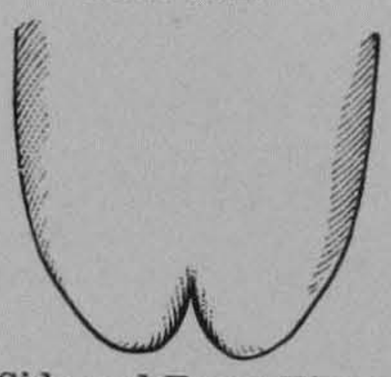
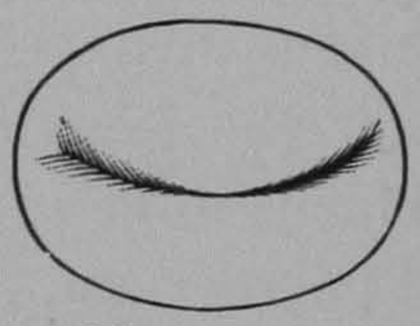


FIG. 103.

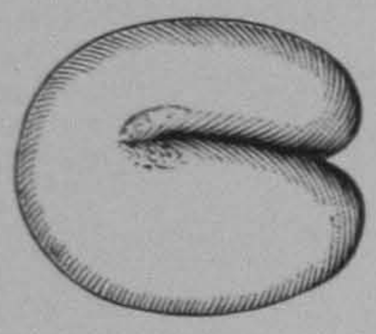


Side and Front Views of a Simple Bilateral Laceration, requiring no treatment.

a marked notch on either side; secondly, the cervix presents two well-defined lips, and is even torn down to the vaginal vault: the lips are soft, flaccid, and not thickened; thirdly, the tear is not so

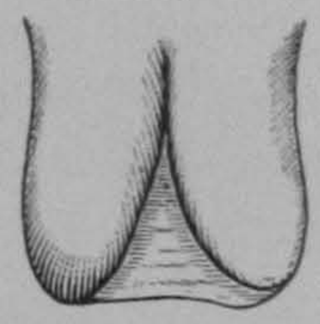
evident on inspection as in the last variety, but the cervix appears thickened, and hardened, its angry red centre presents the appear-

Fig. 104.



Front View of a Unilateral Laceration requiring no treatment.

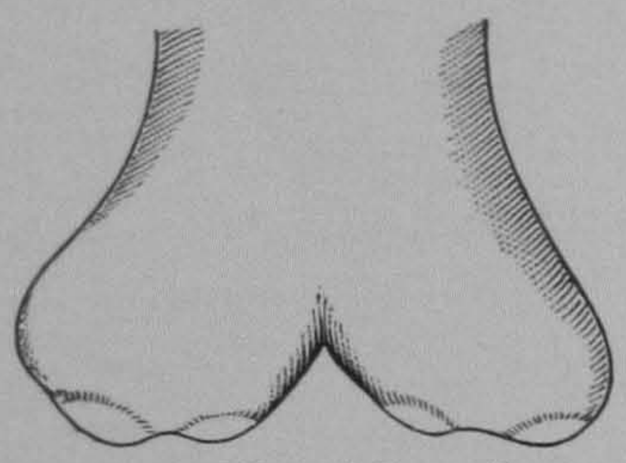
Fig. 105.



Side View of a Unilateral Laceration; such a laceration may cause abortion in the latter months of pregnancy.

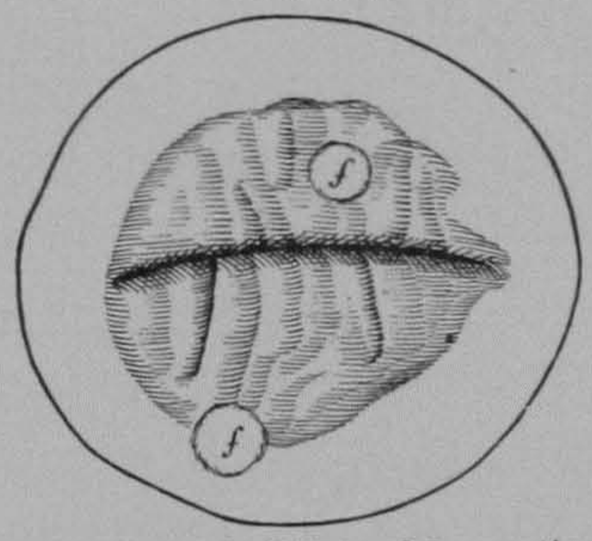
ance of an erosion, and distended glands are more or less abundant. Out of the cervical canal exudes a glairy or muco-

Fig. 106.



Side view of a Bilateral Laceration, requiring treatment. The lips are everted, and the Nabothian follicles stand out as prominent papillæ.

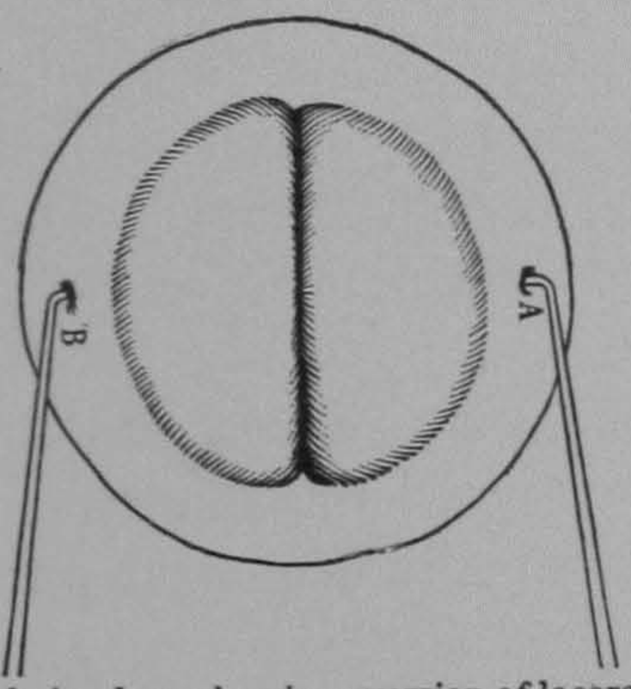
Fig. 107.



Front View of a Bilateral Laceration, showing eroded area and Nabothian follicles.

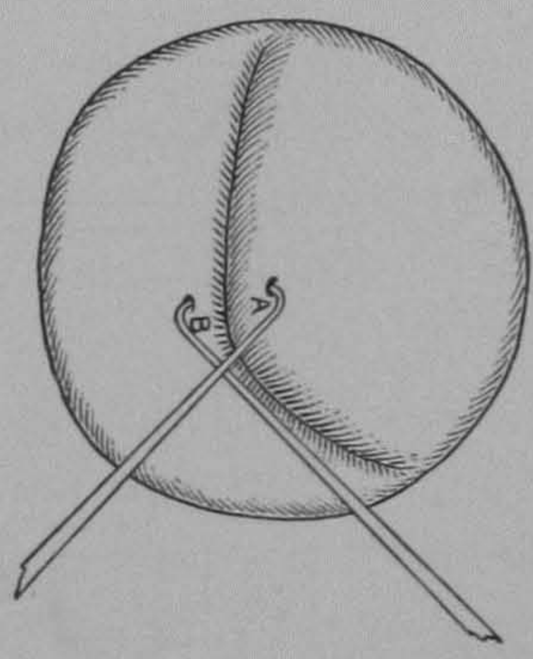
purulent secretion, which continually irritates the ulcerated part and prevents it from healing; in fact it has in the beginning been

Fig. 108.



Tenacula in place, showing eversion of lacerated cervix.

Fig. 109.



Tenacula crossed, showing the method of approximating the lacerated lips, demonstrating the true condition.

the origin of the ulceration. On catching the anterior and posterior margins of the cervical lips in two tenacula and attempting to draw

them together, it is at once evident that there is a laceration with well-defined lips, which are deeply infiltrated. As the lips are drawn together the erosion in the centre is turned in and disappears, showing that it is a part of the mucous membrane of the cervical canal. In other words, the condition is that of a lacerated cervix with everted and eroded lips, that condition so frequently mistaken in the past for ulceration of the cervix. This third class of cases is the only one demanding treatment.

It is an undoubted fact that the majority of cases of cancer of the cervix occur in women who have borne children and have a lacerated cervix. It is also undoubtedly true that cancer of the cervix uteri occasionally occurs in nulliparous women. The only reason for the surgical treatment of the first two classes would be the fear that any ulceration of even small degree would have a determining influence on the development of cancer. This fear is, however, not so well supported by facts as is generally supposed.

Laceration of the cervix is frequently associated with subinvolution of the uterus and pelvic venous stasis. Leucorrhea, dysmenorrhea, aches and pains, a feeling of weight and bearing down or dragging referable to the pelvis, associated with a feeling of general weariness are the symptoms generally found in this condition.

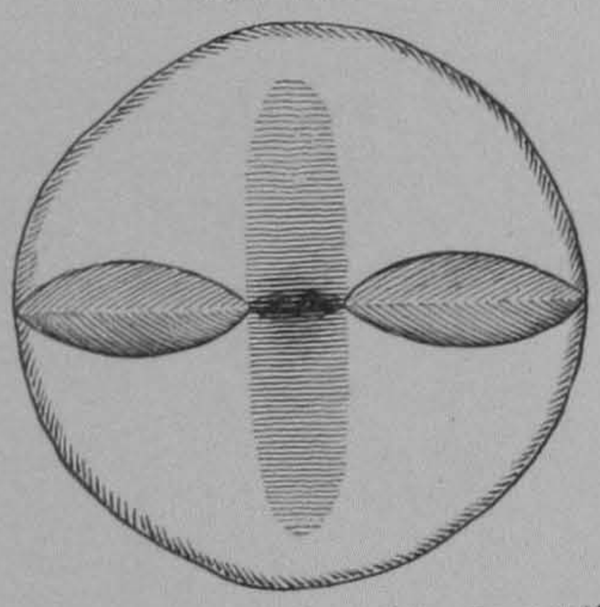
The best method of relieving these associated troubles is by repairing the cervix, in order to start involution of the uterus, which process commonly follows operative procedures on that organ. The steps of the treatment consist in the proper denudation of the lips and approximation of the denuded surfaces by sutures. Where infiltration is very marked the lips cannot accurately be brought together, and therefore preparatory treatment is required.

Preparatory Treatment.—This consists in measures intended to deplete and diminish the size of the cervix. Douches of water, as hot as can comfortably be borne (110° F.), once or twice daily, for from ten to twenty minutes, followed by a rest for an hour, are valuable adjuvants. The cervix must be exposed by a bivalve speculum with the patient in the dorsal position. Depletion is then obtained with a fine knife, opening as many distended follicles as can be seen. From four to eight drachms of blood should be drawn once or twice a week. By following each depletion with a 50 per cent. boroglyceride tampon, left in for twenty-four hours, the cervix in from three to six weeks will be reduced in size and quite flaccid, and in a favorable condition for the plastic operation.

Plastic operation = an operation restoring a part.

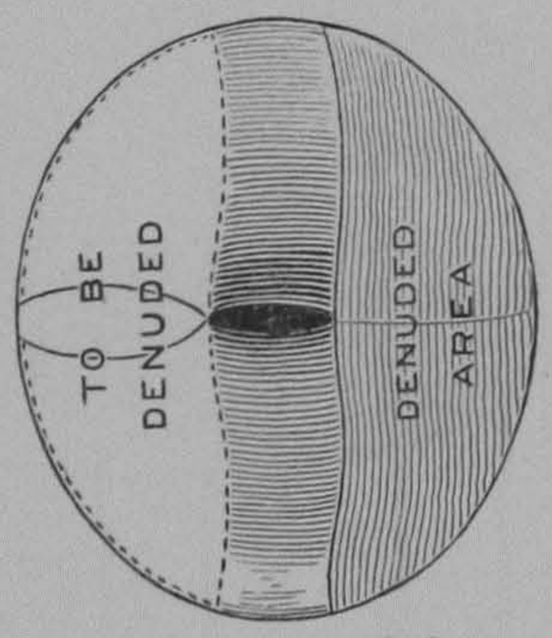
Operation.—As a preliminary step it is absolutely necessary to make sure by a bimanual examination that there is no inflammatory disease of the pelvis involving the ovaries and Fallopian tubes. The patient is then placed in the dorsal position, with the buttocks on the perineal pad and the thighs held well flexed on the abdomen by the leg-holder. The cervix is exposed by retracting the posterior vaginal wall with a Sims speculum, and the anterior and posterior lips are caught by bullet forceps and drawn down toward the vaginal orifice. A constant irrigation of the field of operation is kept up throughout the whole procedure. Drawing the cervix a

Fig. 110.



Incision in the Angles of the Laceration.

Fig. 111.



Method of Denudation.

little to one side, an incision is made in the angles of the tear as deep as the denudation on the lips is to be carried. Scar-tissue is often encountered in the angles, and the incision must extend below this, into healthy tissue.

From this incision the denudation is carried down, first on the posterior, then on the anterior lips, as shown in the diagram, by means of a sharp knife. Care must be exercised not to denude too much on the vaginal surface, and, on the other hand, to leave a small strip of undenuded mucosa in the centre of both lips, which strips represent the future cervical canal. Both lips are similarly denuded.

An effort is made in the denudation to go through the cicatricial into the sound tissue everywhere, and to make such denudations as will when approximated secure a conical cervix with a small external os to project into the vault of the vagina.

No fear need be entertained of wounding the circular artery. Any vessel which is divided during the operation will be controlled as soon as the sutures are introduced.

The sutures are of silkworm-gut and fine silk or catgut; the

former used at the points of greatest tension, and the latter when necessary to secure accurate superficial union between the tense deep sutures.

A small stout curved needle with its carrier is grasped in the needle-holder and a strand of silkworm-gut hooked into the loop. The operator, while the lips are drawn well apart by his assistants, introduces the needle just above the angle of the incision, on the vaginal mucosa, and with a sweep brings it out in the cervical canal high up. It then crosses the canal to a corresponding point, re-en-

FIG. 112.

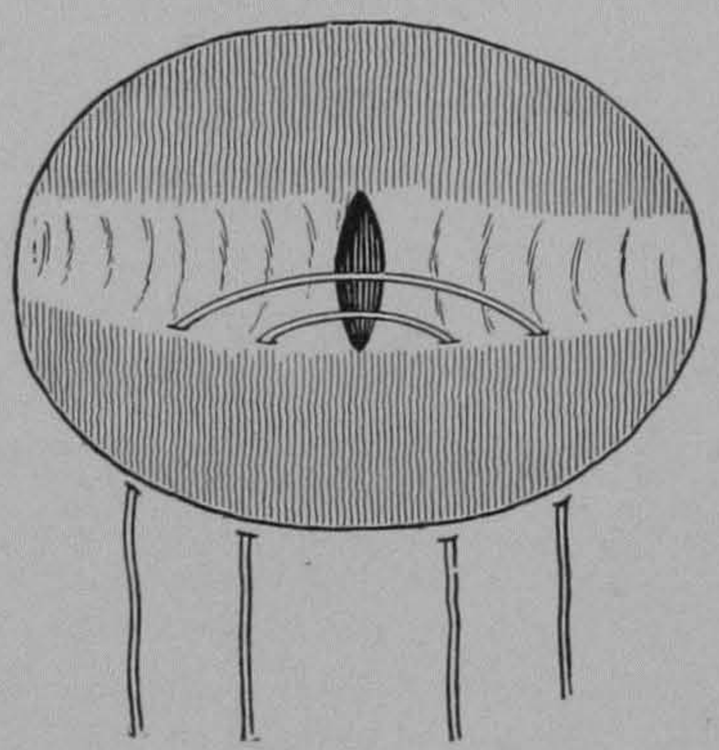
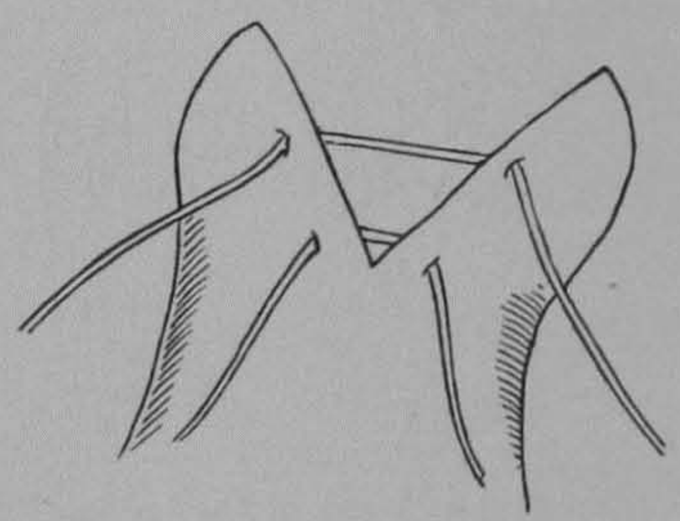


FIG. 113.



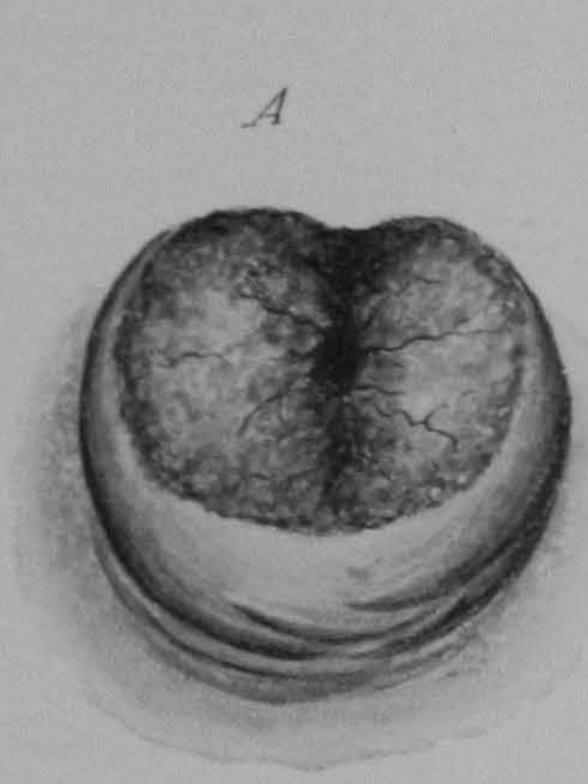
Silkworm-gut Sutures in place on one side, ready to be tied; front and lateral views.

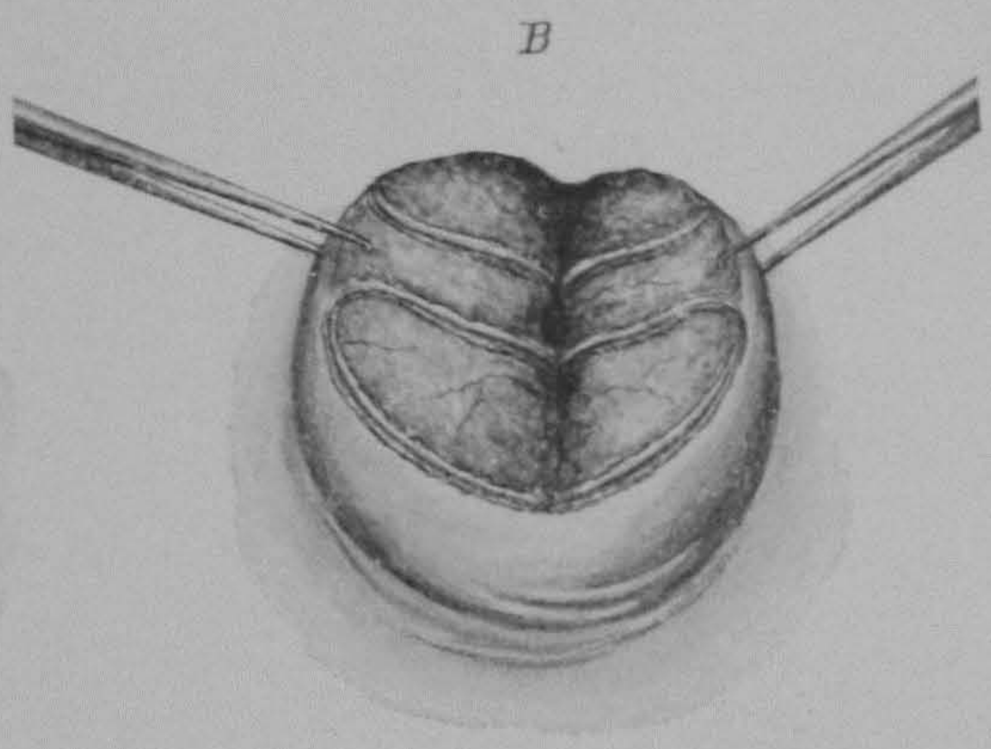
ters the tissue, and reappears on the vaginal mucosa of the opposite lip, at a point opposite and corresponding to the point of entrance. A second suture is passed, in like manner, a little lower down on the lips, and often a third near the point. These sutures are left loose and clamped in a pair of artery forceps, while the sutures of the opposite side are introduced in like manner.

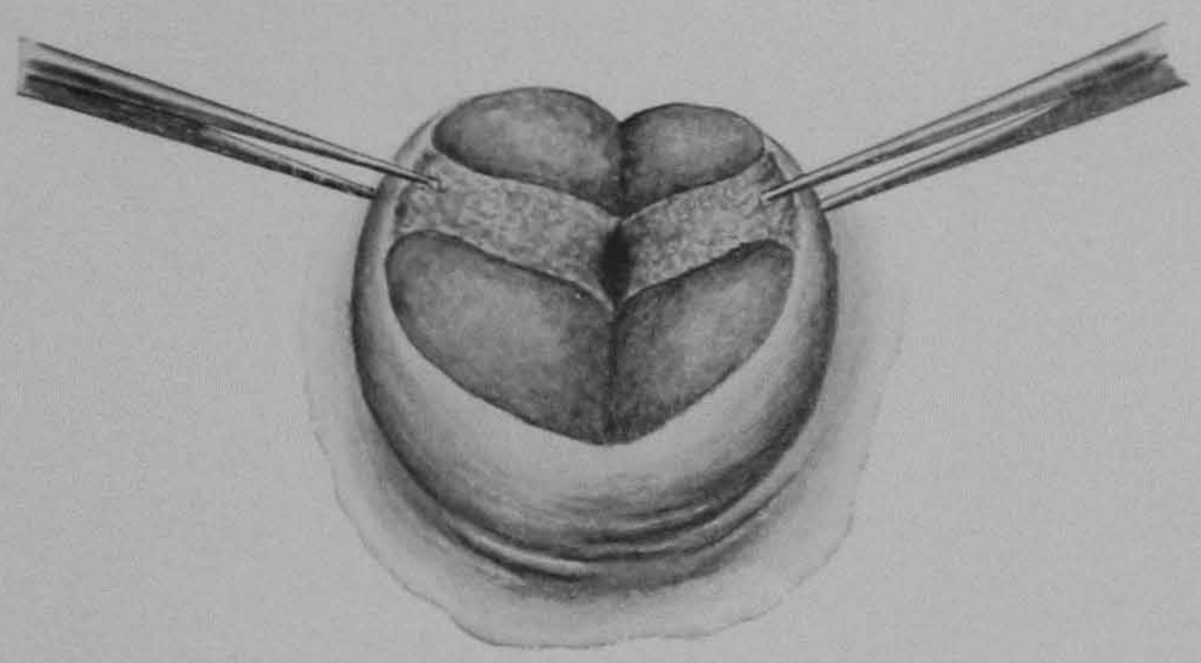
There are two ways of securing sutures so as to hold the lips snugly together: they may simply be tied in a square knot, or they may be held in place by running a perforated lead shot down, and pushing it up on the suture until the lips are drawn closely together, when the shot is squeezed and allowed to remain in place. When the vaginal outlet is operated upon at the same sitting, it will be easier to remove the cervical stitches if the shot are used. It is not necessary to observe such great care in removing all blood-clots from the angle of the wound before approximating, as has been generally supposed.

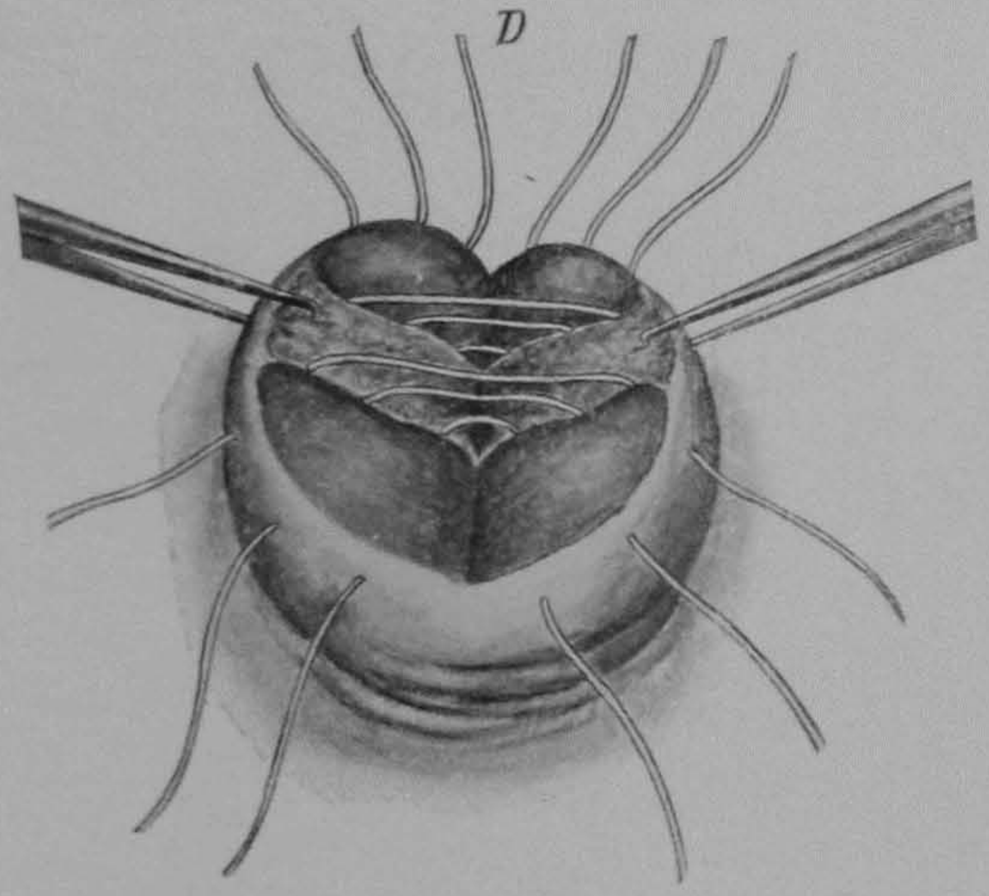
The uppermost sutures are tied first, and then in succession the other ones. Any pouting between the sutures should be disposed

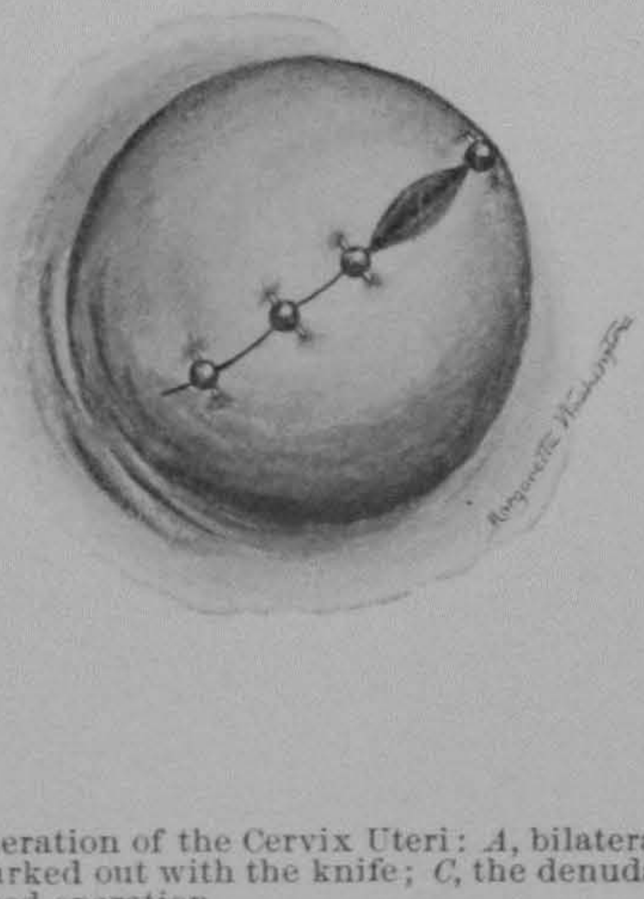
PLATE XVII.











Steps of the Operation of Trachelorrhaphy for Bilateral Laceration of the Cervix Uteri: *A*, bilateral laceration with erosion; *B*, the area to be denuded has been marked out with the knife; *C*, the denudation has been accomplished; *D*, sutures introduced; *E*, completed operation.

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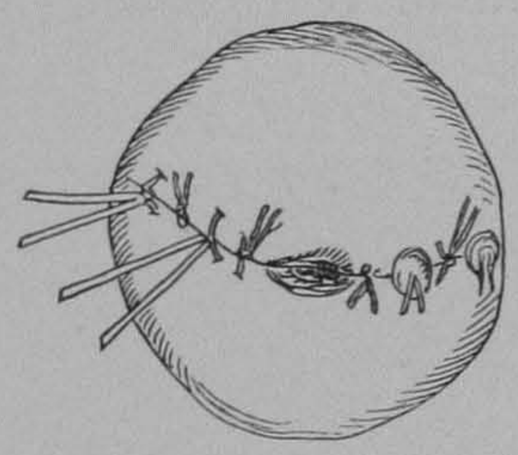
of by introducing superficial sutures of fine silk or catgut between the silkworm-gut.

FIG. 114.



Silkworm-gut Sutures in Place, tied on the right and shotted on the left side; intervening Approximation Sutures of fine silk.

The vagina is washed out after the operation, and a loose iodoform gauze pack applied, which is left in place five or six days. The vulva is protected with sterilized cotton and a T-bandage.

It is not necessary for the success of the operation, so far as securing a good union is concerned, that the patient should remain in bed; it is, however, important in a certain class of run-down patients, for the sake of their general good condition and to make an impression on their nervous system, that they be kept in a recumbent position for two or three weeks. This combination of the rest cure with the operation is so important that it may well be doubted in many cases if the rest has not been the most important, if not the sole factor in the recovery.

Catheterization need only be practised when the patient is unable to void her urine. The bowels should be opened at least every other day by mild purgative medicines or by enemata of soap and water or oil and water.

The stitches should be removed in from three to six weeks; when the vaginal outlet has been operated upon, they should be allowed to remain two or three months undisturbed, to avoid dilating the outlet in their removal. They are best removed by placing the patient in the side position and retracting the posterior vaginal wall until one of the sutures is seen; this is caught by a pair of forceps and drawn down until its loop is exposed, when it is cut and the suture drawn out. It is important after all have been removed to make a digital examination in order to verify the fact. Sexual relations should be forbidden for three months.

Incomplete Rupture of the Recto-vaginal Septum.

Recent.—Recent incomplete ruptures of the recto-vaginal septum appear as furrows in one or both vaginal sulci, extending down to

Fig. 115.

Virginal Vaginal outlet.

the posterior comissure and involving the skin perineum as far back as, but not including, the sphincter ani. These furrows are made by the child's head or shoulders in passing through an outlet either relatively too small or through one whose tissues are not sufficiently elastic, or, again, in entering the outlet in a faulty position. The forceps are a frequent factor in the production of these injuries. Shallow tears of this character may be neglected, and if the parts are not infected during the puerperium their natural apposition will generally be sufficient to ensure a partial primary union, provided injections have not been given during the convalescence, and union prevented by the nozzle of the syringe entering into and separating the lips of the wound. Hemorrhages following

these lacerations are not often serious, but are at times exceedingly annoying.

Tears extending half an inch down into the tissue should be repaired at once; that is, within the first twenty-four hours. It is a common but serious error to estimate the amount of injury by a superficial examination of the external parts. This is insufficient, as the worst part of the tear usually lies concealed within the vagina, and can only be disclosed under a good light and by separating the labia and walls of the lax vagina by two fingers.

The process of suturing is simple. As the natural tendency of the tissues is to lie in apposition, but few sutures are necessary to assist nature in the repair, and the eye will at once detect the tissues to be held together by sutures. It is well during their introduction to control the uterine discharges by a tampon of iodoform gauze placed loosely against the cervix. Two or three silkworm-gut sutures are sufficient to close a long vaginal rent. The first one should be introduced at the upper angle of the tear on the side toward the median line of the vaginal floor, and passed well down to the bottom of the sulcus, where it is brought out. It is reintroduced at a point near its exit, and is carried up and brought out at a point on the mucous membrane of the pelvic side of the laceration directly opposite the point of original entrance. On the skin surface two or three superficial or half-deep silk sutures will complete the approximation. A dry powder of boric acid or boric acid and iodoform (7 : 1), and a loose vulval pad of absorbent cotton, complete the dressing, which should be renewed frequently for the first few days. In eight or ten days all sutures may be removed, and, in the absence of sepsis, the union will be perfect if the sutures have been well applied.

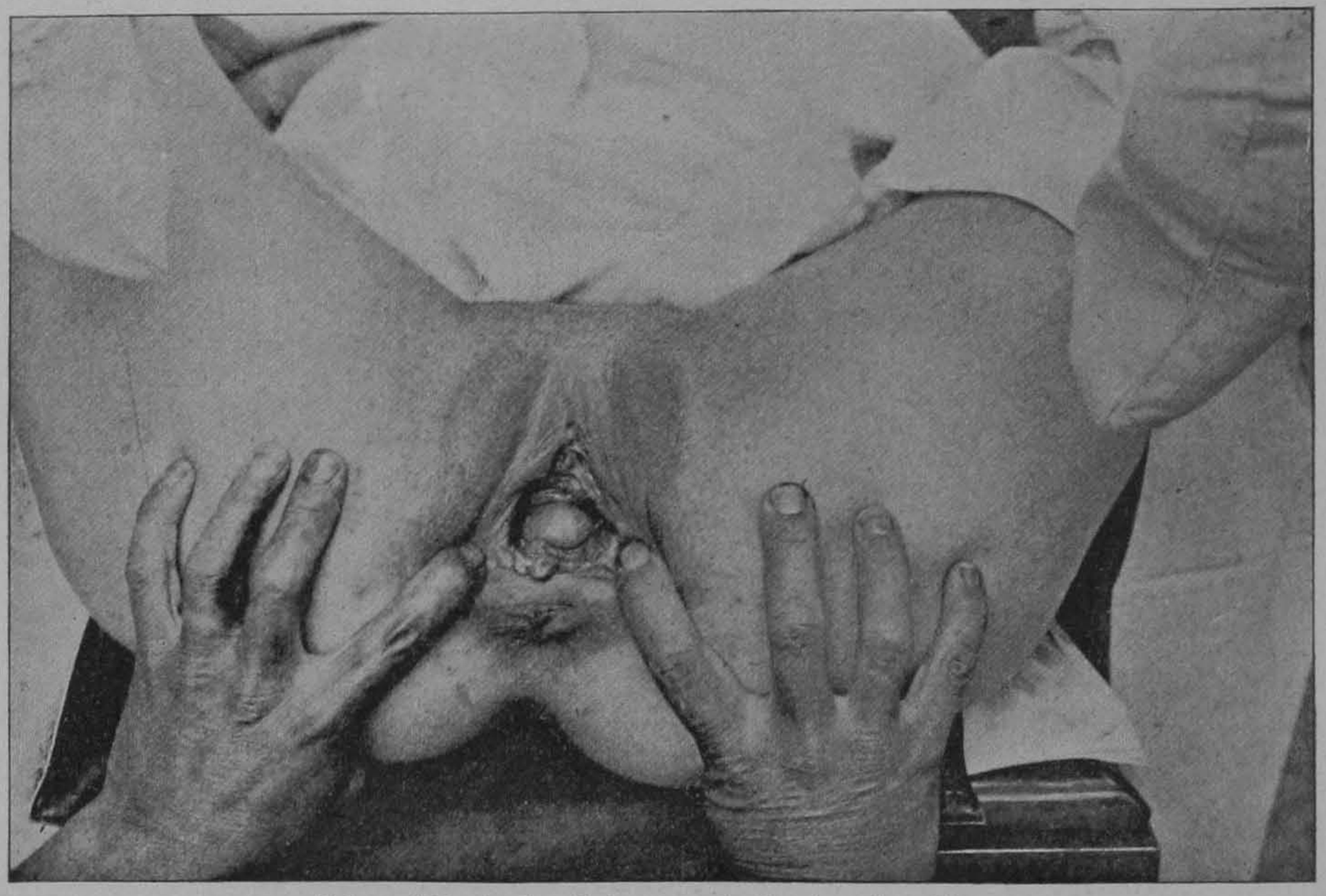
Old Incomplete Tear.

Relaxation of the Vaginal Outlet.—If a recent incomplete tear is neglected, there may be one of several results: a complete union, which is unfortunately rare, may occur throughout without interference. A partial union may take place at the bottom of the tear, while the upper part granulates and cicatrizes: the cicatricial contraction in such a union may be sufficient to compensate for the deficiency created by the tear. Finally, the result of such an injury is a permanent deficiency at the introitus, resulting in a relaxed outlet, from which the vaginal walls become more and more

everted, forming cystocele and rectocele in the erect position, and from straining efforts, until finally in some cases the bladder, cervix, and uterus escape, a prolapse following as the result of the relaxation.

A relaxed vaginal outlet is recognized by the flatness of the crease between the buttocks in front of the anus. Often, a series of con-

FIG. 116.



Relaxed Vaginal outlet as seen in the dorsal position.

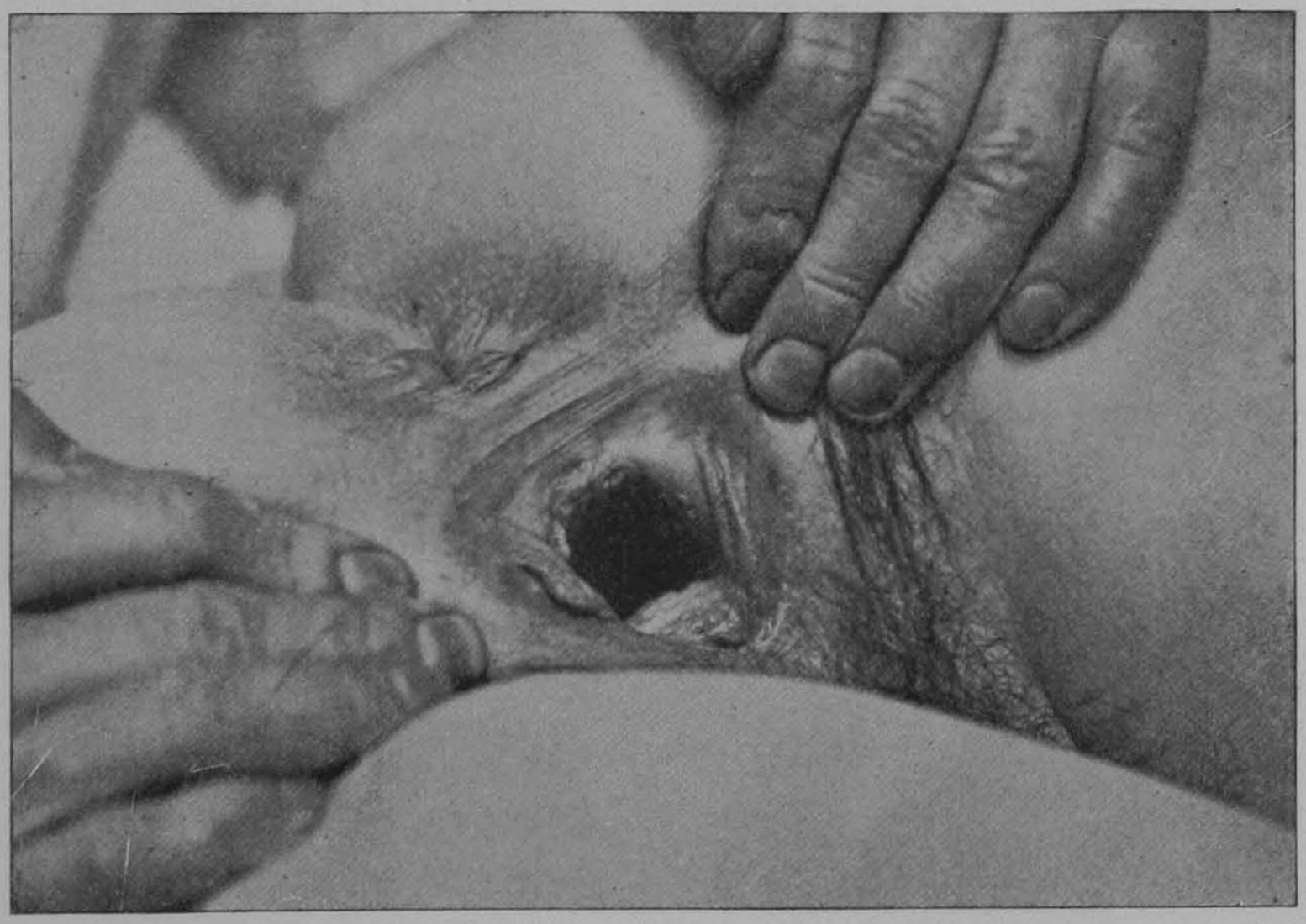
centric wrinkles surround the entrance of the vagina, which is dropped back nearer the anus. The commissure of the labia may be entirely uninjured, or it may be torn down to the sphincter, and replaced by a pit of scar-tissue. This latter fact in no way influences the condition.

On separating the labia on either side with the fingers, the outlet presents an everted, gaping appearance, and on testing it with the fingers, its structures are found lax and incapable of resistance. The cervix is readily exposed by making a speculum of the fingers to push back the anterior and posterior vaginal walls, and the uterus is quite often found retroposed and in descensus.

The direction of the outlet in cases of relaxation is characteristic. Normally, it points downward and backward toward the end of the sacrum, while here its direction is toward the promontory or into the abdomen.

The symptoms occasioned are numerous and in direct relation to the lesion. There is a feeling of pressure, of dropping out, of something protruding, and of discomfort on walking, the patient preferring the sofa; there is backache, and a dragging sensation, due to the increasing displacement of the uterus. Leucorrhea and all

FIG. 117.

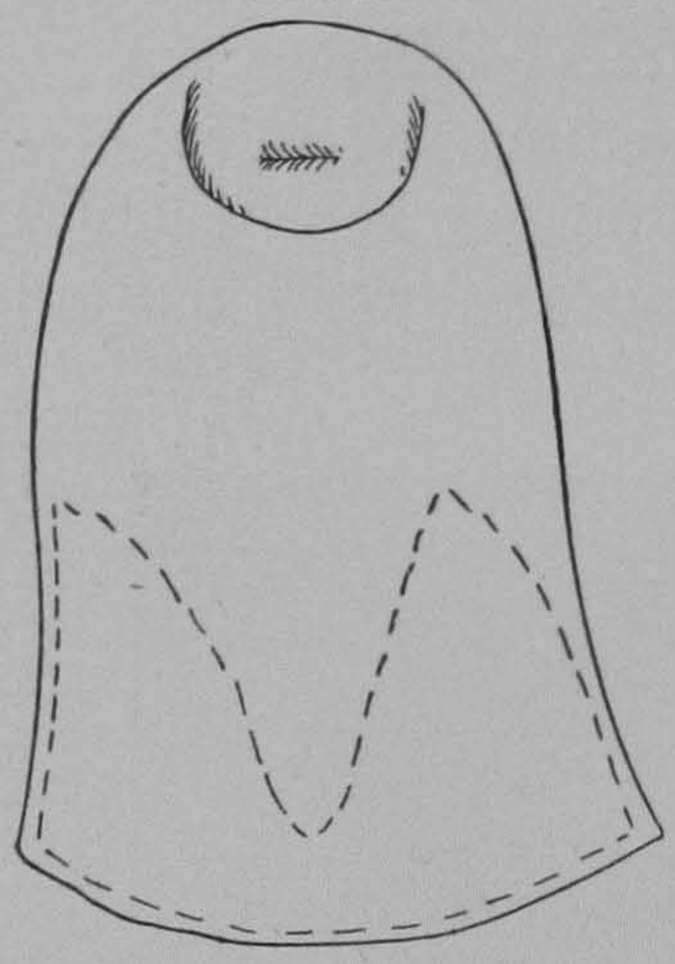


Appearance of Relaxed Vaginal Outlet in Sims's Position.

the symptoms of endometritis are apt to supervene. The bowels are constipated, as the expulsive efforts are wasted on the outlet, the sphincter ani muscle forming the greatest point of resistance. Nervous symptoms, referred to the stomach and head, are but expressions of the general loss of tone.

The treatment of this condition is by a resection of the outlet and both sulci in a similar manner to the Emmet operation. The denudation includes the posterior two-thirds of the outlet and extends up each sulcus in the form of a triangle. It is unnecessary to extend this denudation on the outside, beyond the ring of the hymen or its broken remains, but it should be carried not less than an inch or an inch and a quarter up each sulcus, and frequently even more. It is best to outline the area to be denuded with the point of a knife. Two points in the hymeneal ring on opposite sides are caught with curved tenacula between a half and three-quarters of an inch from the urethra. These points are represented by the lower caruncles or remnants of the hymen, and when drawn together will show the size of

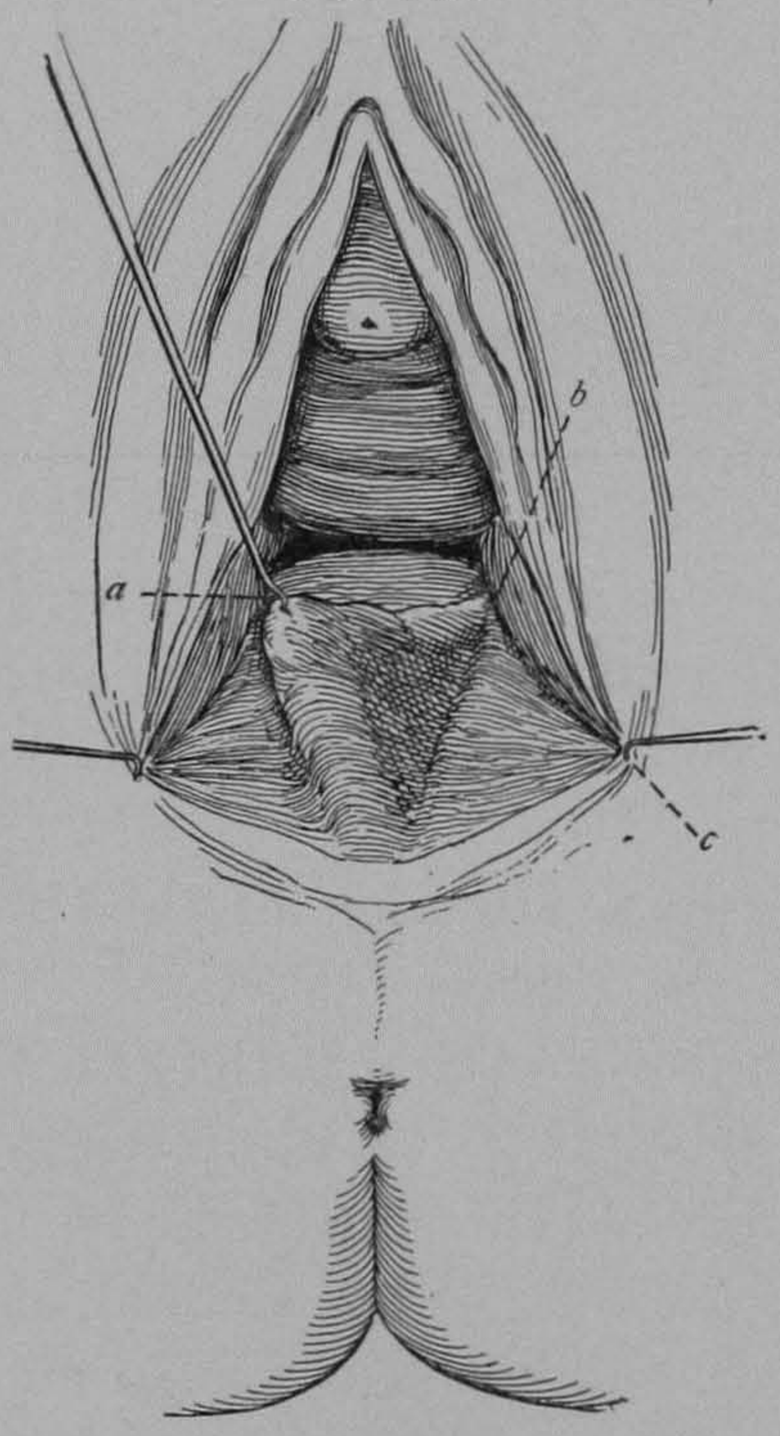
FIG. 118.



Looking down on the Floor of the Pelvis. Dotted lines indicate the area to be denuded.

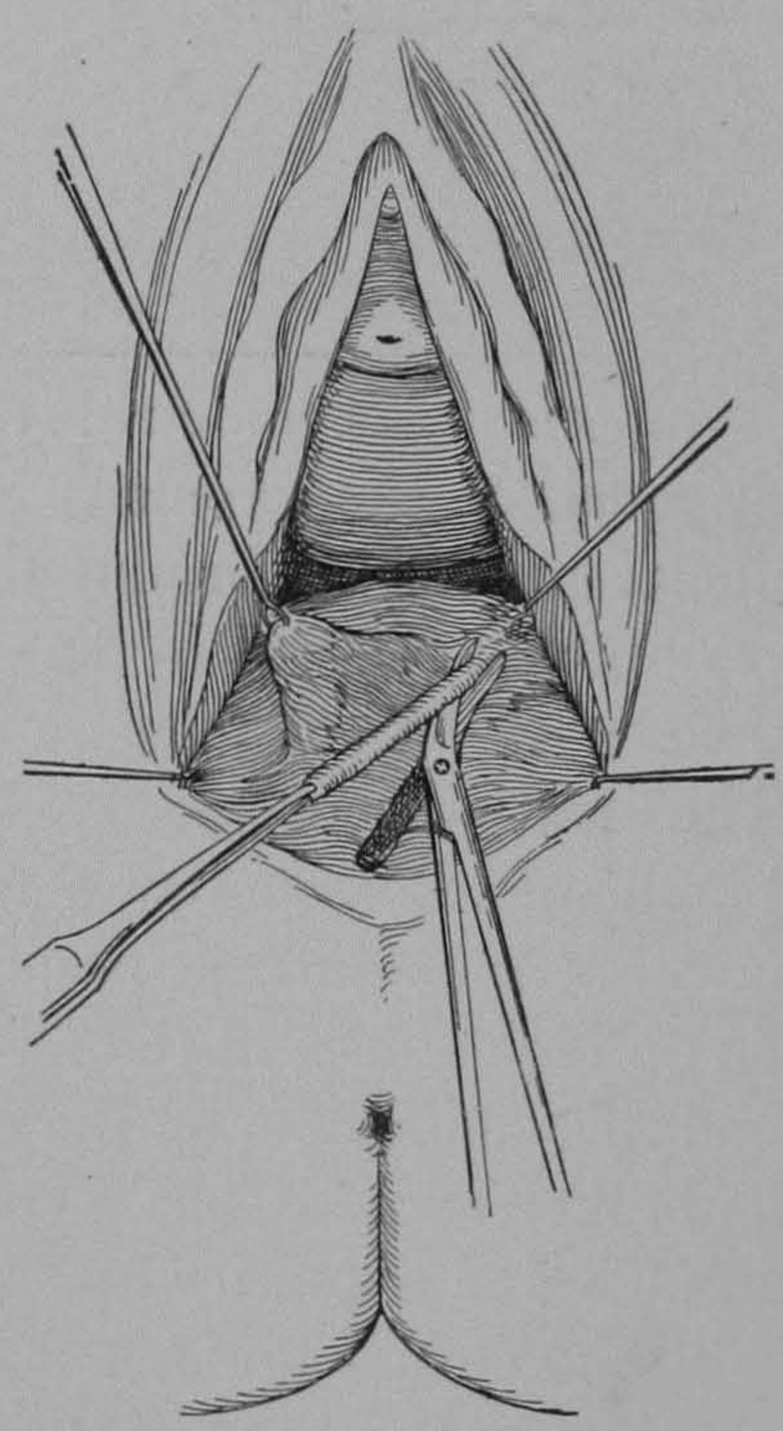
the repaired outlet, due allowance being made for future relaxation. The rectocele is now caught up by a tenaculum at a point nearest the vulva which is most easily lifted up to or near the urethra. By dragging slightly on these three tenacula the vaginal tissues will be so thrown into ridges as to disclose a deep sulcus running up the vagina on each side of the rectocele toward the cervix uteri (Fig. 119). These sulci represent the original tears, and were produced by the levator ani muscles and fascias retracting to the pelvic walls after being torn from their vaginal attachments. At the extreme end (toward the cervix uteri) of both these sulci a tenaculum is to be introduced into the tissue in the depths

FIG. 119.



The rectocele is seized with the tenaculum at *a*, and is drawn to the right, exposing the left vaginal sulcus, *a*, *b*, *c*, which must be denuded. The point *b* should be secured with a tenaculum before denuding.

FIG. 120.

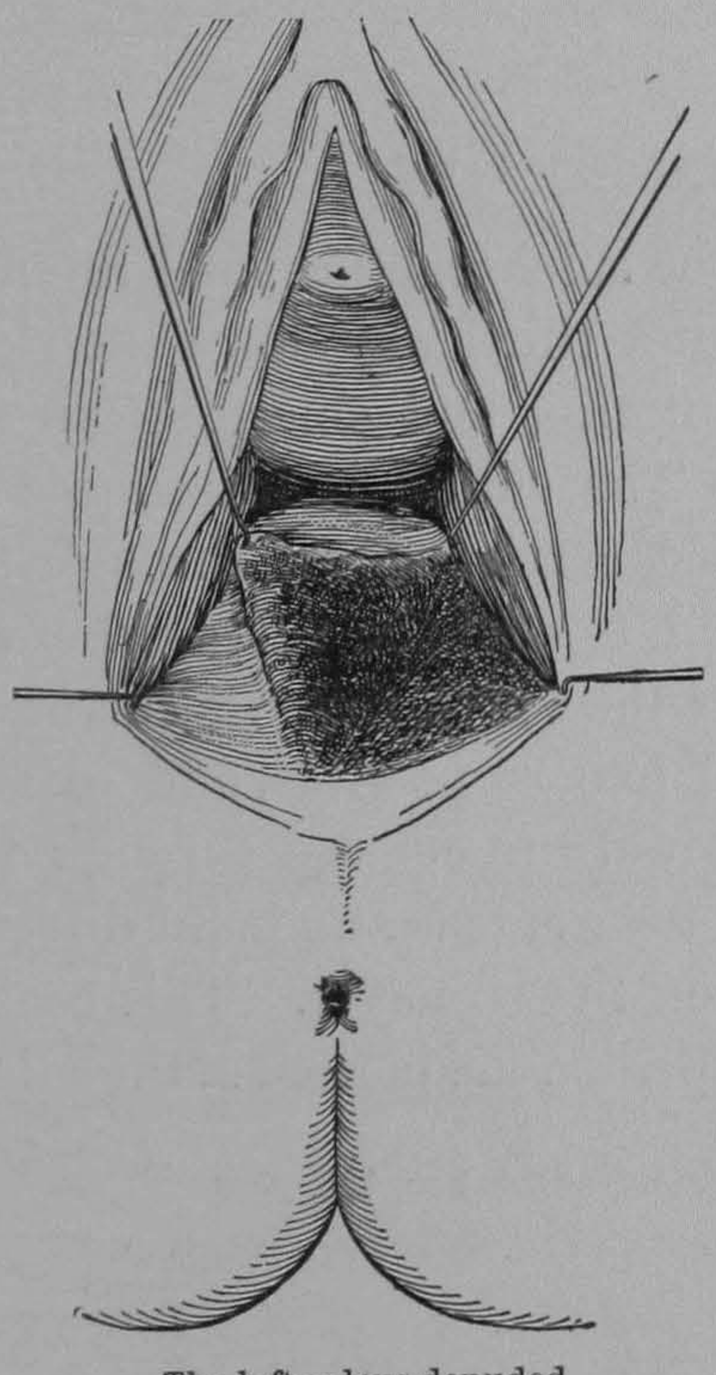


Method of denuding the sulcus.

of the sulcus: these points may be a half inch, they may be two inches, from the vaginal outlet. Five tenaculi are now in place—

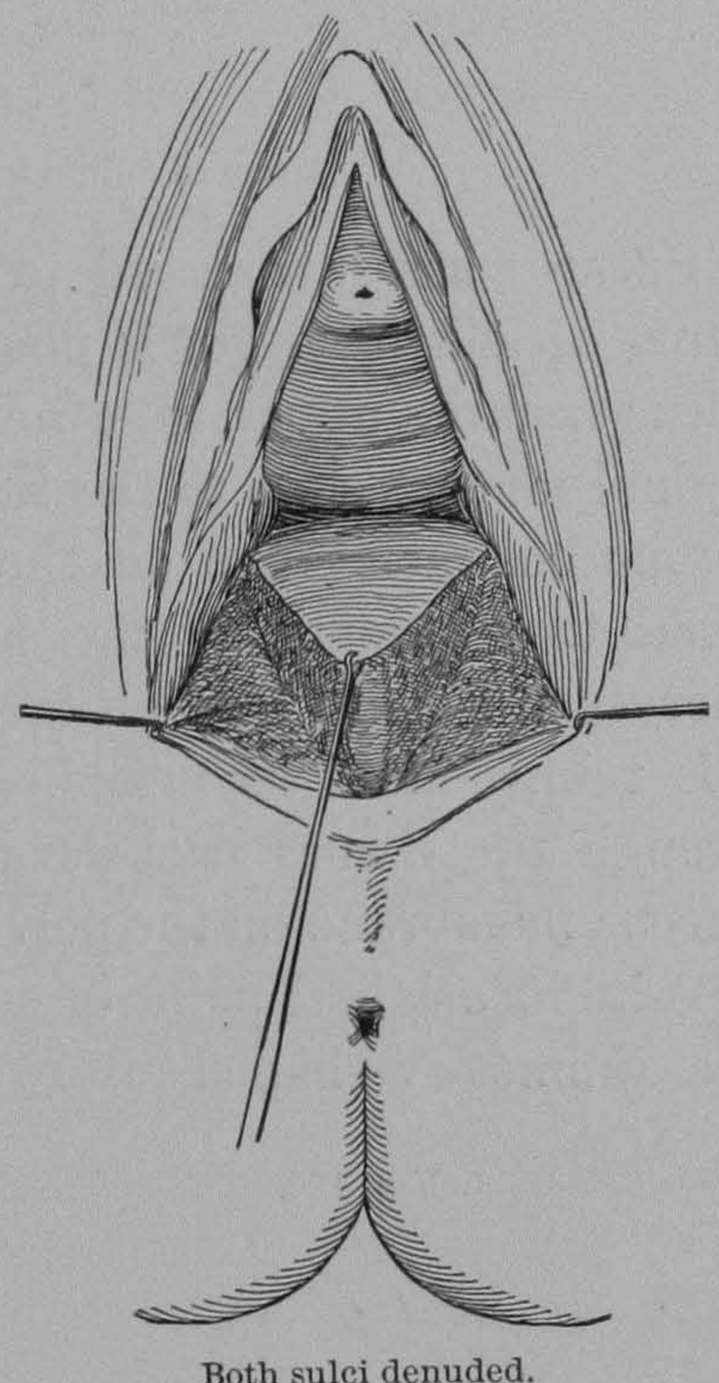
one on each side of the vaginal outlet at the lowest points represented by the remnants of the hymen, one at the uterine end and in the depths of each sulcus, and one in the crest of the rectocele. These five points may now be joined together by straight incisions made with the point of a knife, drawn first from the tenaculum in the crest of the rectocele to each of the tenaculi in the depths of the sulci, then from these two tenaculi (in the depths of the sulci) respectively to the tenaculi which catch up the caruncles (remnants of the hymen). Finally, the two tenaculi catching

FIG. 121.



The left sulcus denuded.

FIG. 122.

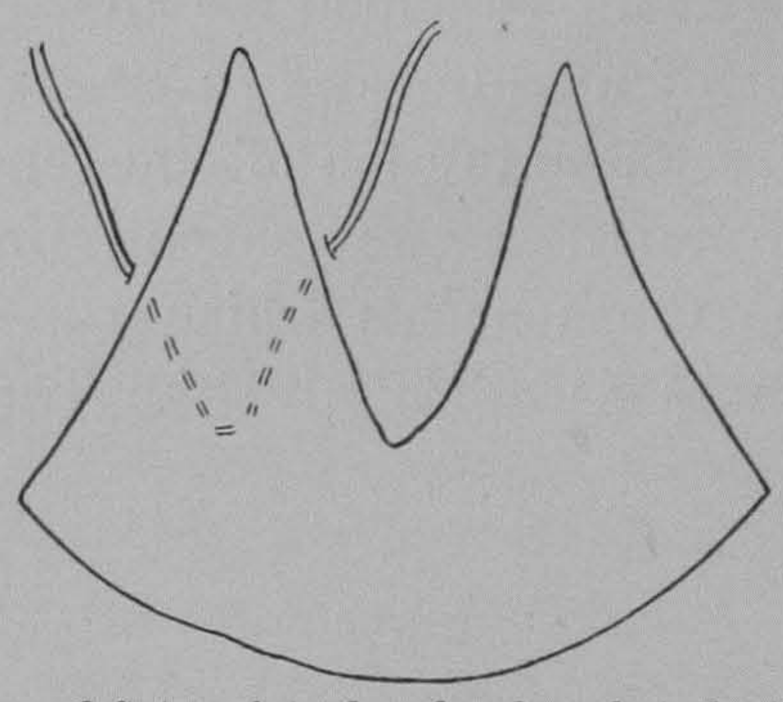


Both sulci denuded.

up the caruncles are joined together by a U-shaped incision running from one tenaculum down, around the posterior commissure of the labia, to the tenaculum on the opposite side, care being taken to keep the incision well within the mucous membrane and not too encroach upon the skin. The incisions would appear diagrammatically as shown by Fig. 123. All the mucous membrane included between these preliminary tracings is to be denuded. The denudation is rapidly made by catching up the tissues with dissecting forceps within the limits of the marking, and cutting it off in long strips with scissors curved on the flat (Fig. 120). Bleeding vessels

rarely require tying, as the sutures introduced immediately after the denudation control all hemorrhage (Figs. 121 and 122).

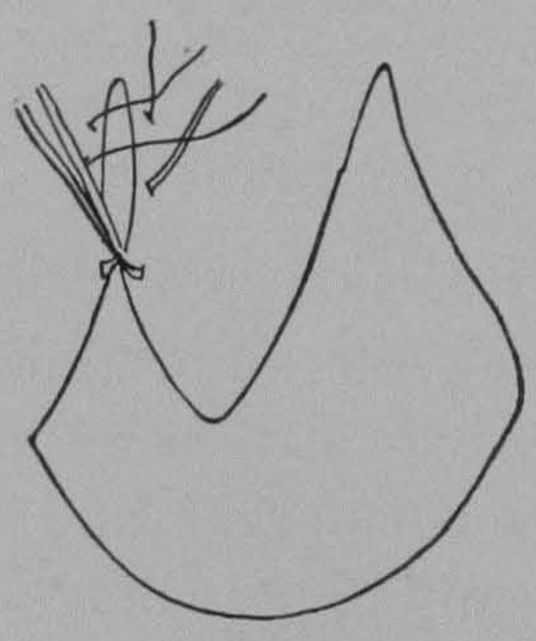
FIG. 123.



V-shaped Suture introduced and ready to be tied.

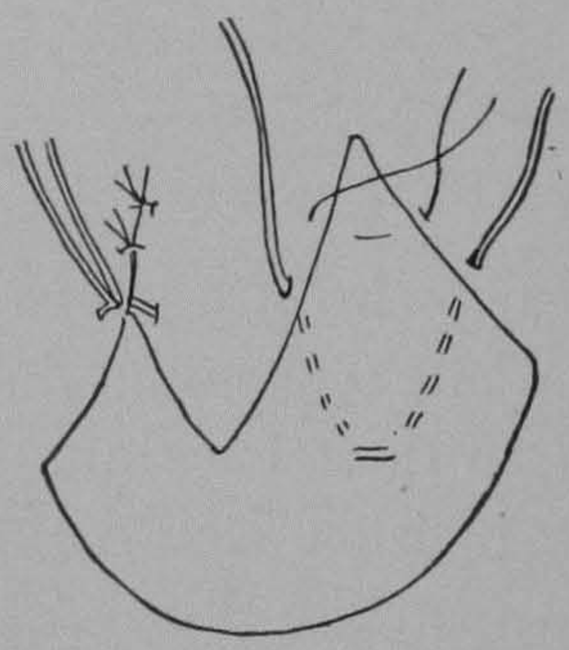
Sutures are introduced to bring the sulci together, and the first suture of silkworm-gut is placed about a third way down the right sulcus from its upper (uterine) end, entering and emerging on the vaginal mucosa close to the incision. The suture is introduced in the mucous membrane on the rectocele, carried down through the tissues to the depth of the sulcus and toward the vulva, where it emerges at a point half an inch nearer the vulva than its entrance; it is reintroduced as near its point of exit as possible, and carried through the tissues backward and upward to emerge through the mucous membrane on the pelvic side of the sulcus at a point directly opposite its original point of entrance on the rectocele. This constitutes Emmet's V-shaped suture (Fig. 123). At the bottom of the sulcus

FIG. 124.



V-shaped Suture tied, and Superficial Catgut Sutures in place.

FIG. 125.



Sutures tied on Right and in place, ready to be tied, on Left Side.

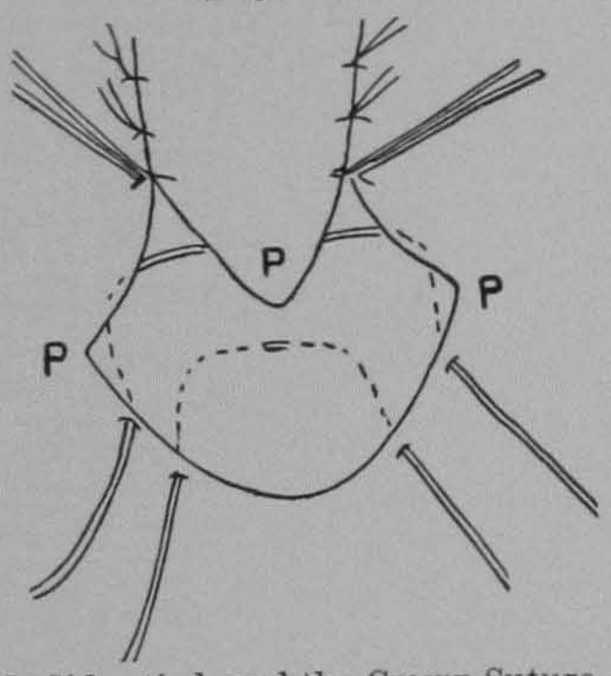
the suture appears at a point lower down toward the vulva than either the point of entrance or emergence. The suture, which is tied at once, drags back toward the cervix uteri the lower vulvar

part of the denudation and holds it there; it also serves as a tractor in bringing down the denuded area above, thus facilitating the introduction of the remaining sutures.

The silkworm-gut suture is tied, and the approximation above toward the cervix uteri is made perfect by three or four fine catgut sutures, each of which must sweep well under the tissue, the last one being introduced at the angle (extreme or uterine end of the sulcus) to prevent hemorrhage from the vessels cut during the denudation. In the opposite sulcus silkworm-gut and catgut sutures are placed in a similar manner (see illustrations).

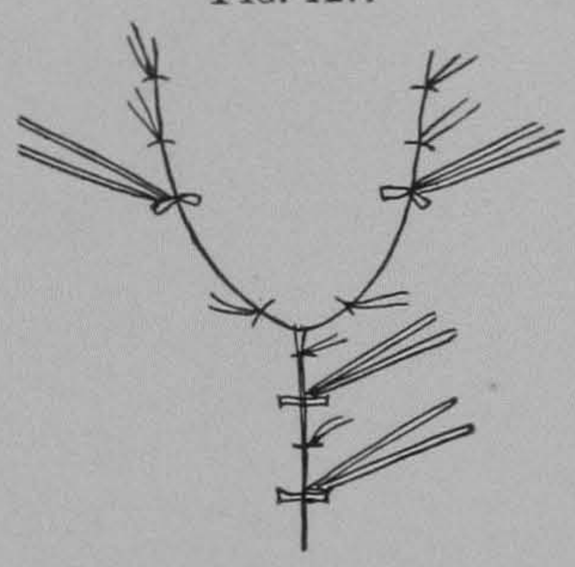
The wound area is now reduced to a shallow pit, representing the lower or vulvar end of the denudation in the sulci, on each side of

FIG. 126.



Sutures of both Sides tied, and the Crown Suture, together with one Superficial External Suture, in place.

FIG. 127.

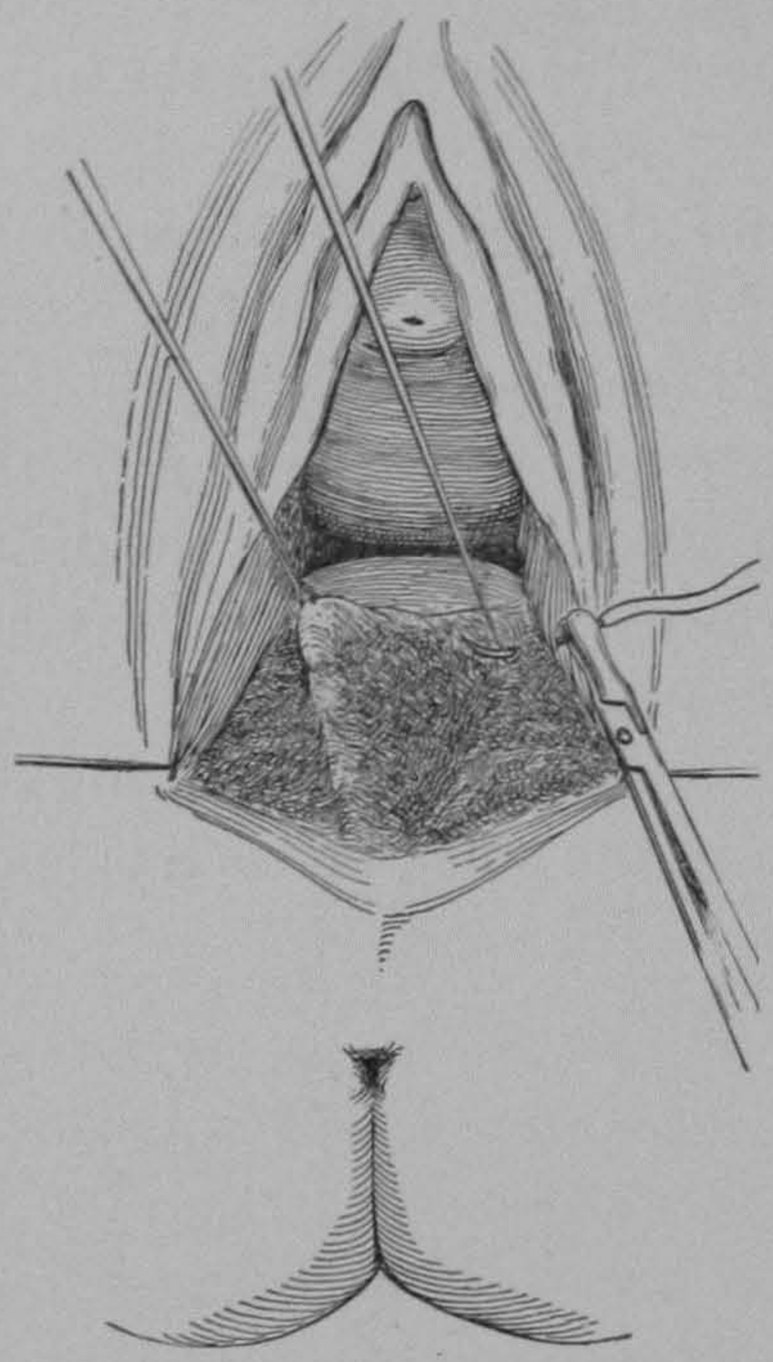


Completed Operation.

the central undenuded tit (crest of rectocele), and the more external parts of the denudation (Fig. 126).

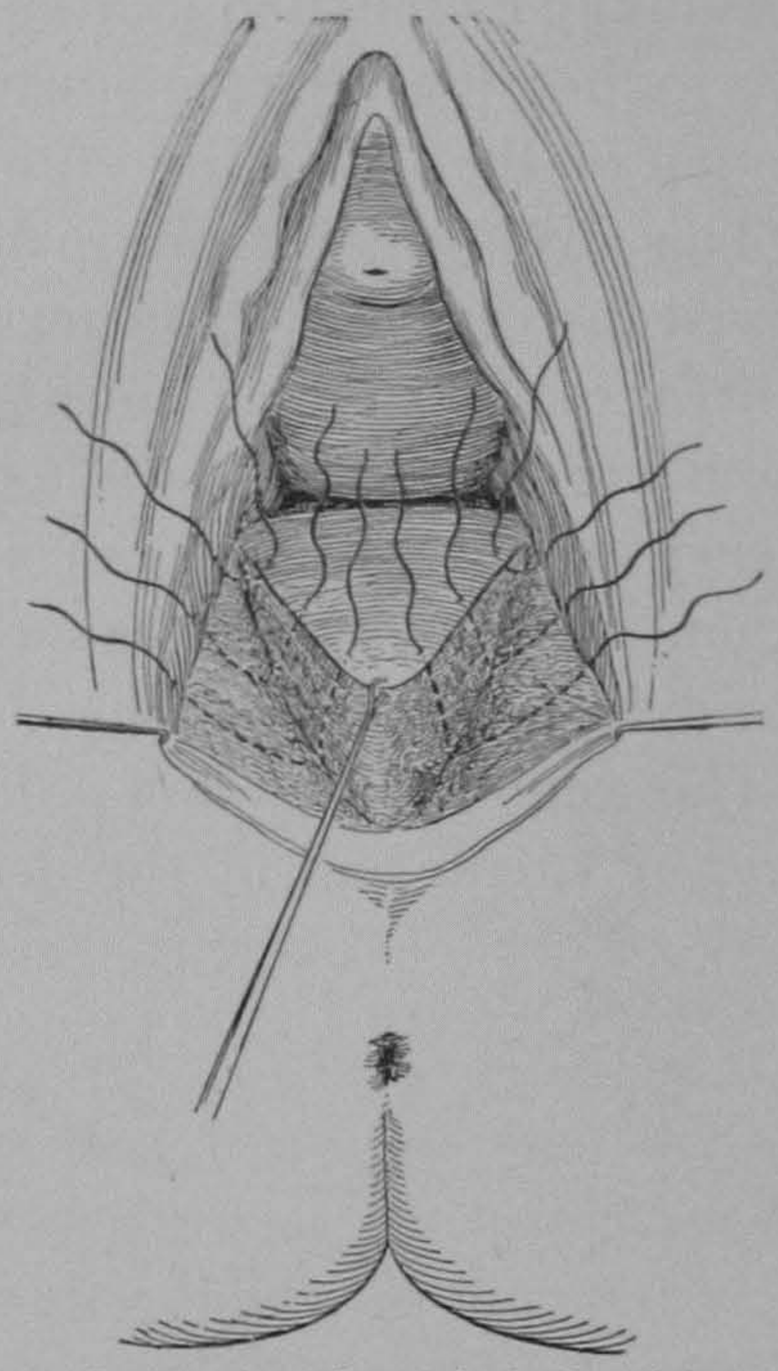
One or two additional V-shaped sutures placed in each sulcus progressively toward the vulva now almost completely close this whole area (Fig. 129). To complete the operation a silkworm-gut suture is introduced, gathering together the three original points represented by the tenaculum at the crest of the rectocele and the two tenaculi at the caruncles (Fig. 132). The suture is introduced into the mucous membrane inside the labia minora of one side, close to the denudation, and is carried under the lower caruncle, emerging in the denuded area close to the mucous membrane edge; it is then carried under the tenaculum in the crest of the rectocele, at a point far enough forward to avoid pulling on the rectocele when tied, and is then carried in a similar manner under the caruncle on the opposite side, emerging at a point corresponding to its original point of entrance. The points to be approximated by this suture (the so-called crown

FIG. 128.



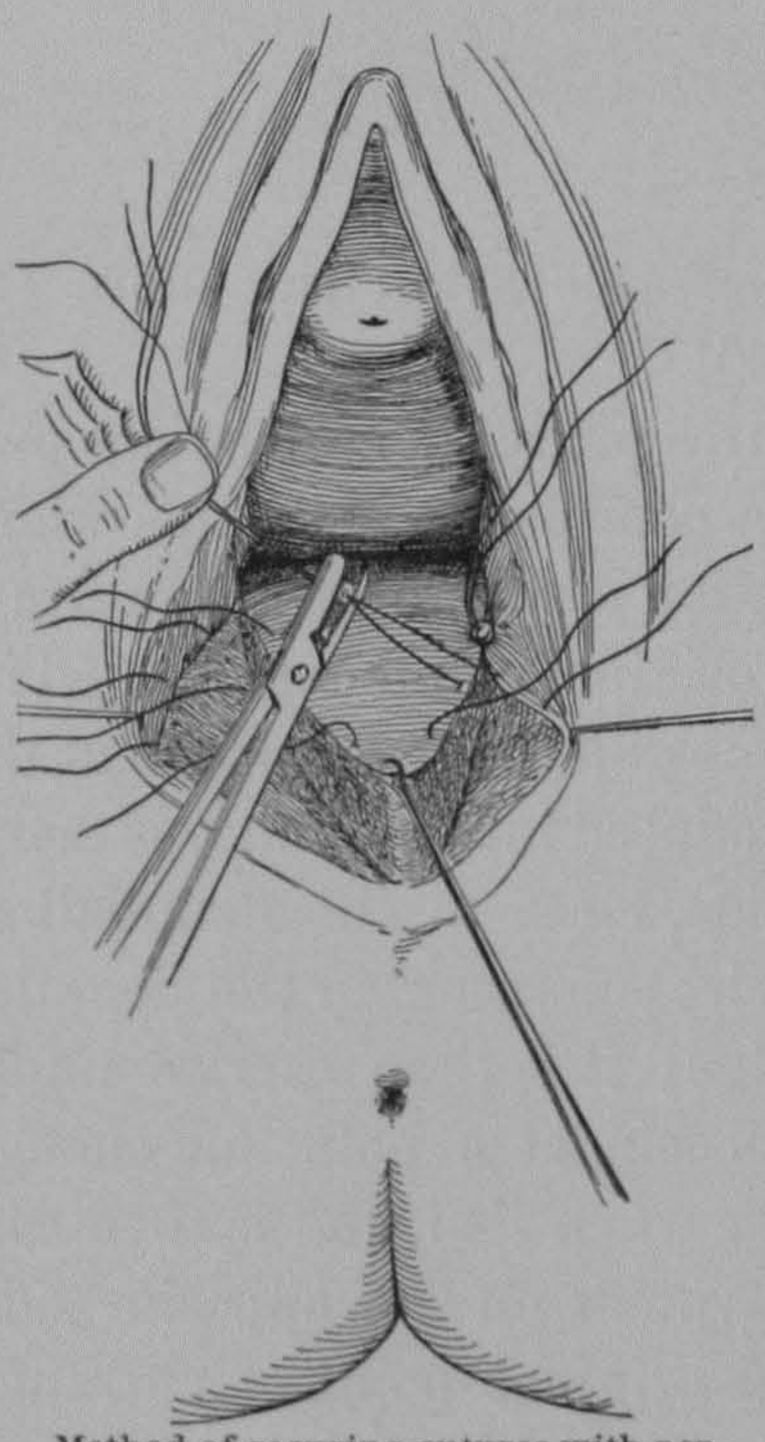
Introduction of the sutures. The point of the emerging needle is held by the tenaculum.

FIG. 129.



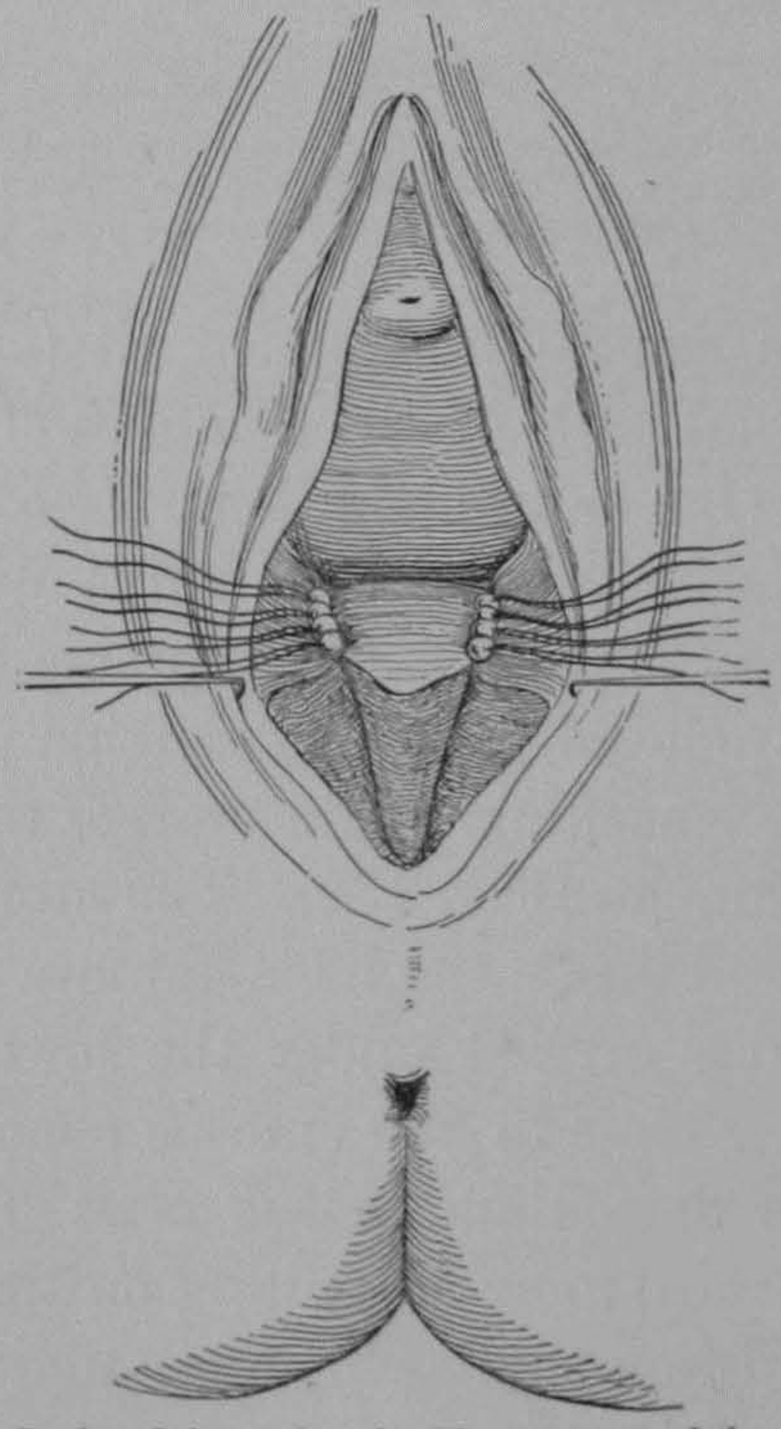
Sutures introduced in both sulci.

FIG. 130.



Method of securing sutures with perforated shot.

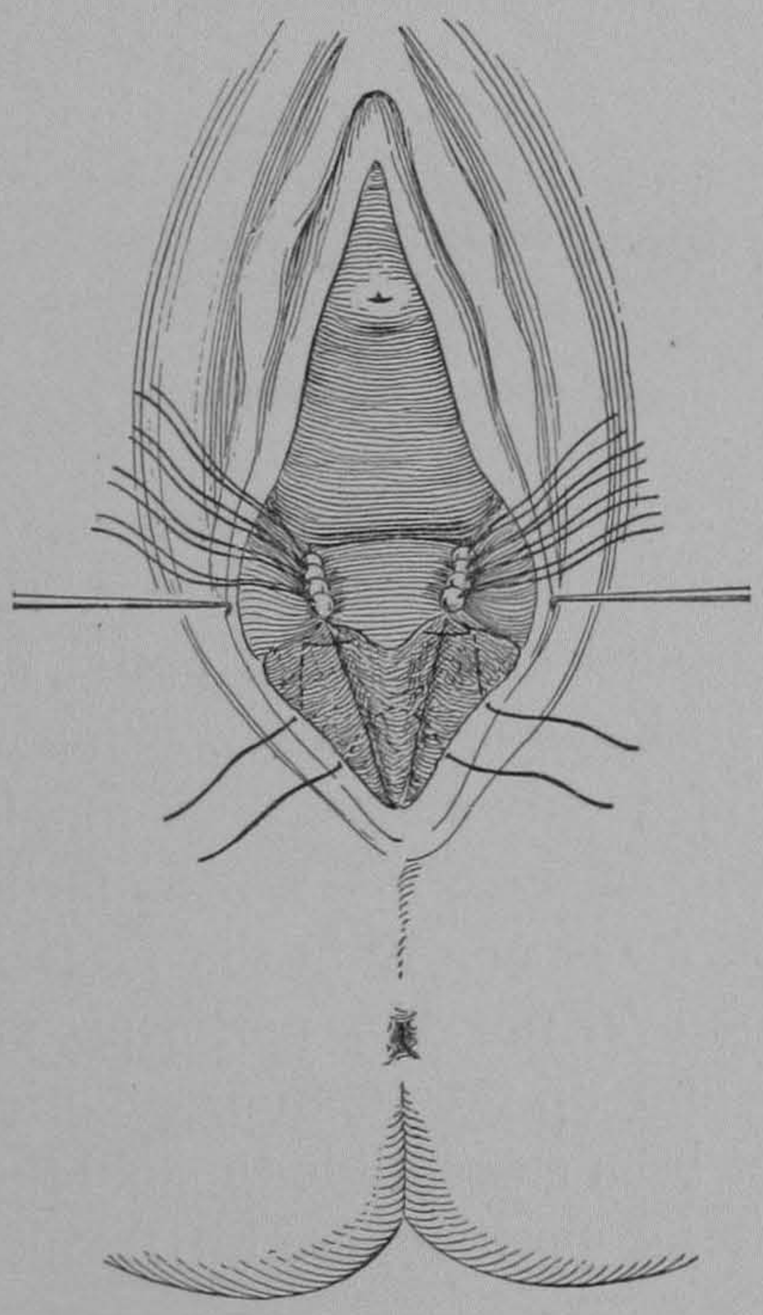
FIG. 131.



Both sulci are closed. The support of the perineum is restored. The posterior wall of the vagina is brought forward. The rectocele is cured.

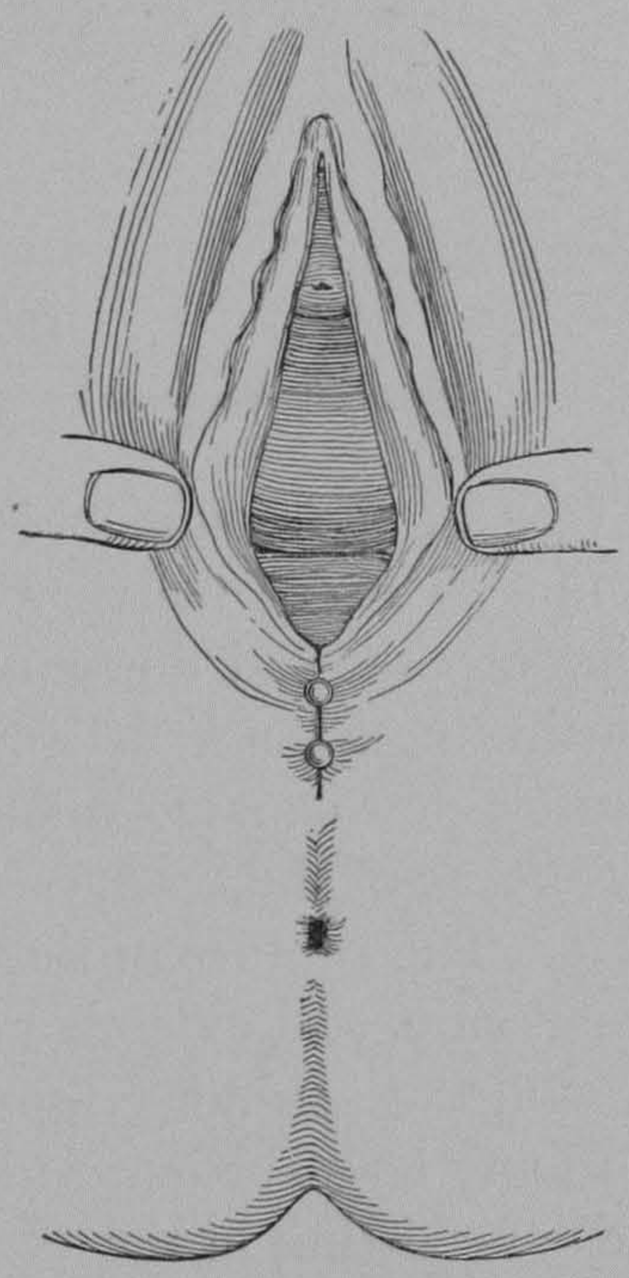
stitch) are represented in Fig. 126, by P, P, P. By drawing these points together with the suture the wound is contracted to a superficial area which can be readily approximated by a few superficial external silk sutures. On tying the crown stitch all previously placed sutures disappear from view into the vagina, for the reason that the denudation has been almost entirely within the vagina (on the pelvic floor) where the laceration originally occurred. The stitches have been introduced well within the vagina and have

FIG. 132.



Sutures for closing the superficial perineum and fourchette. The anterior suture is called the "crown suture."

FIG. 133.



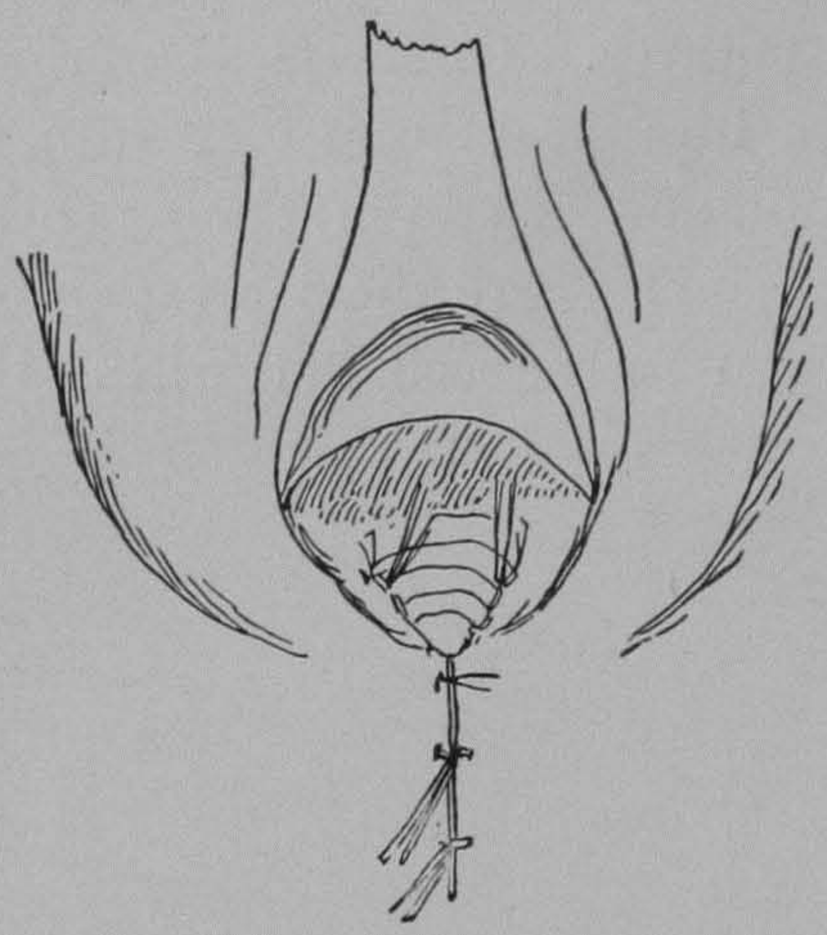
Emmet's operation of perineorrhaphy completed. Compare this figure with that representing the condition of the parts before operation (Fig. 119).

been so placed as to drag all the relaxation into the canal from which it originally came (Figs. 133 and 134).

Rupture of the Recto-vaginal Septum.—In complete rupture of the perineum the septum between the genital and the alimentary canals is broken down for a variable distance, and both possess a common outlet. The tear extends from the posterior commissure of the labia back through the perineum and the sphincter muscles into the rectum and for a variable distance up the rectum and vagina. This injury may vary from a superficial tear, barely involving the

sphincter muscle, to a rupture extending one or more inches up the septum toward the cervix.

FIG. 134.



Speculum introduced into the Vagina, showing the result of the operation.

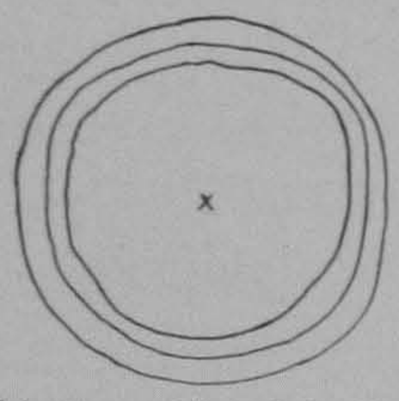
One of the commonest causes of rupture of the recto-vaginal septum is rapid delivery of the child's head with forceps, thus bringing the head down upon an insufficiently relaxed outlet, and substituting a hasty delivery, accomplished during a few pains, for nature's slow equable dilatation attained only after a great number of descents of the head, each time wedging the orifice a little farther open. The rupture in these cases begins at or within the posterior commissure, and extends rapidly back over the skin perineum, and through the sphincter into the anus and up the septum. A head, unusually large, or one which has not been susceptible to moulding, or one persisting in the occipito-posterior position, are all frequent occasions of this injury.

The immediate dangers from sepsis are great in these cases, as in all difficult labors involving delay, because of extensive injury to the soft parts, more or less prolonged manipulation, and especially the subsequent constant contamination of the lacerated area by fecal discharges.

SYMPTOMS.—The common symptom is incontinence of feces and flatus. Where the rupture has merely extended through the sphincter or but a short distance beyond, it is possible for the subsequent contraction of the scar-tissue, forming between the two ends, to so bind them together and give the sphincter muscle a *point d'appui*, that it will remain functionally active and no feces will

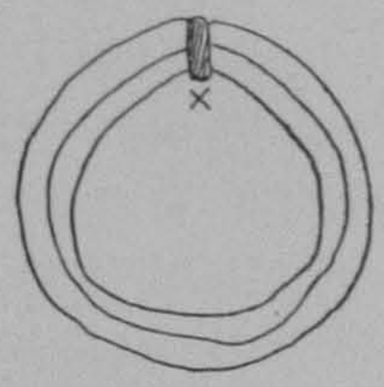
escape, and sometimes the patient will control even the flatus. It is important to recognize this fact, as writers have positively asserted

FIG. 135.



Normal Sphincter; no break in the continuity of the circular fibres.

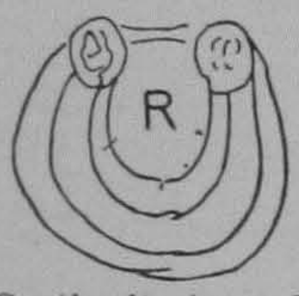
FIG. 136.



Slight Solution of Continuity in the Sphincter filled in with connective tissue. No impairment of function.

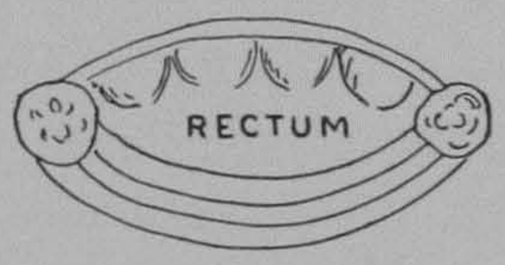
that with every tear of the sphincter its function is necessarily abrogated. We must be prepared, therefore, to meet lacerations of all degrees—shallow tears in which the sphincter's function is not apparently interfered with, those which are deeper but in which

FIG. 137.



Solution of Continuity imperfectly bridged over with connective tissue. Partial loss of function.

FIG. 138.



Sphincter completely Ruptured. Divided, ends being widely separated. Complete loss of function.

some control of feces is still retained, and still others in which there is a complete tear resulting in absolute incontinence, the flatus escaping and the patient soiling herself as soon as the desire for evacuation is felt.

TREATMENT.—The only successful plan of treatment is reunion of the torn surfaces by suture. Such an expectant plan as binding the knees together and restraining the patient's movements after confinement, is to be rejected as worthless. In all these cases the immediate operation is called for within twenty-four hours after the labor. If performed aseptically, this operation will generally be successful.

THE IMMEDIATE OPERATION.—If the patient has been greatly exhausted by the confinement, or if the physician is not prepared to perform the operation properly at that time, he may delay six, twelve, eighteen, or even twenty-four hours, before proceeding to unite the tear. The operation may be performed at once or after

the patient has had a refreshing nap and some stimulation administered. She is laid transversely across the bed with the hips resting on the edge on a perineal pad, which drains into a bucket. If the bed has a spring or woven-wire mattress, and the centre sags so much as to prevent free drainage, a board similar to the fracture-board used in hospitals should be inserted beneath the springs. It is not necessary to give an anesthetic unless the patient be so nervous as to be unable to control herself, as a traumatism which has been sufficient to cause the rupture will also produce partial anesthesia of the soft parts by pressure. A little moral suasion by the physician will often quiet a nervous women sufficiently to secure her intelligent co-operation during the operation. The patient will sometimes be able to hold her own legs flexed upon the abdomen, by placing one hand under each knee, but it is always better to employ some form of leg-holder, if at hand, as it relieves her of the tension. The leg-holder described in the chapter on Technique is the one which is best employed. A competent nurse or assistant with clean-washed hands stands by the operator ready to assist.

The vagina and external parts are prepared as is usual for plastic operations. The surgeon takes his seat in front of the patient, so that his shoulders are almost on a level with the vulva. His instruments are spread out in an orderly manner on a low table to his right, on a clean sterilized towel, or in a tray, covered with hot water. To his left is placed a basin of warm water for occasional cleansing of his hands. An irrigator containing two quarts of water at a temperature of about 110° F. hangs back of him three feet above the level of the bed.

As the operator separates the labia with his left hand, the assistant directs the water on the parts which at the same time he gently sponges with pledgets of absorbent cotton.

The extent of the tear into the rectum and up into the vagina must be carefully noted. Ragged tits and tissue which resemble large blood-clots must be trimmed off evenly with a pair of sharp scissors.

The next step in the operation may properly be called the reduction of the compound and complicated laceration to a simple form of tear, by closing the rectal part of the rent. This is accomplished by passing a number of interrupted catgut sutures, beginning at the angle and extending down to and including the ends of the sphincter, each entering and emerging on the torn rectal mucous

membrane and penetrating the septum one-eighth of an inch, which is deep enough to secure a firm hold. These sutures are then tied from above downward and the ends dropped into the rectum. There then remains but the edges of a deep perineal and vaginal tear to be approximated. This is repaired by deep sutures of silkworm-gut, beginning in the vagina at the upper angle and passing down over the commissure on to the perineum and to the anus. Each suture extends to the bottom of the tear. They are tied from above down, as introduced.

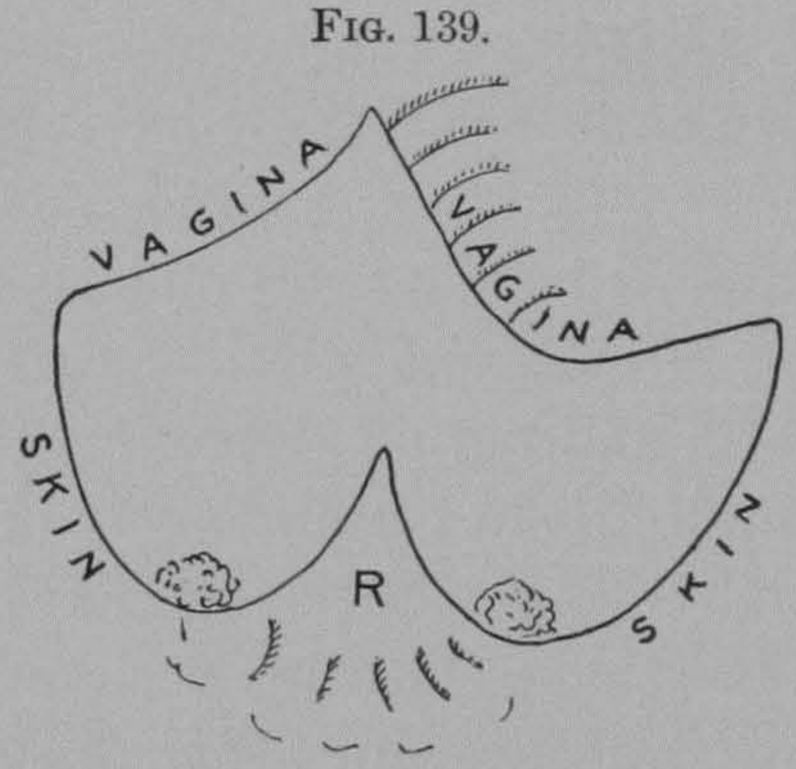
The lowermost external suture must enter and emerge well behind the divided ends of the sphincter, sweeping deeply around in the septum, thus binding the sphincter ends firmly together. About four silkworm-gut sutures to the inch are sufficient. The patient should lie quietly in bed, but she need not be restrained from turning over gently or lying on her side. The bowels, instead of being locked, should be opened freely on the second day by a laxative, followed, if need be, by an enema given with extreme care. If an enema be ordered, careful directions as to the introduction of the nozzle of the syringe should be given to the nurse, as great injury may be done by its careless use. The nozzle should be introduced gently, passed back toward the sacrum, and then the contents of the syringe slowly injected. After the bowels are opened, a mild laxative should be administered every day or so, as the fecal discharge must be kept soft and straining at stools prevented. The vulval orifice and the perineum should be well sprinkled with iodoform and boric-aid powder (1 : 7) and protected by a pad of sterilized absorbent cotton loosely applied and renewed three or four times daily. In eight or ten days the stitches should be removed with the patient in the same position as at the operation. The sutures are removed by drawing each to one side and cutting its loop, and then by pulling it toward the side on which the loop is cut.

The Intermediate Operation for Complete Tear.—During the process of granulation and formation of the cicatrix the wound of a complete tear presents essentially different conditions to the operator from those found either immediately after the reception of the injury or later in the secondary period, when the scar-tissue has been fully formed. From the seventh to the fourteenth days the wound-area is covered with delicate friable granulations, and its margins are marked by pink lines, which contract until finally only a linear

scar remains. The operation at this stage may be performed with ease, and is followed by good results. The patient is brought, as before, to the edge of the bed and the parts thoroughly sterilized. A pledget of cotton saturated with a 10 per cent. solution of cocaine hydrochlorate is laid over the whole lacerated area. In ten minutes the operator may take his seat in front of the patient, and with his thumb in the rectum and his finger in the vagina draw one side of the torn area into view and thoroughly denude it down to healthy tissue by scraping off all the granulations with a sharp scalpel. The older the wound the greater will be the difficulty of denuding its margins properly, and in some cases a sharp pair of scissors will be necessary to complete this part of the denudation. A freely-oozing surface with sharp margins is now exposed. The sutures are then passed as in the immediate operation.

Secondary Operation for Complete Tear.—The secondary operation is performed at any time after the formation and contraction of the scar-tissue are completed. It must be remembered, as it bears an essential relation to the denudation to be made, that the area of scar-tissue at this stage by no means represents the area of the

FIG. 139.



Rupture of the Recto-vaginal Septum: Ends of the denuded sphincter shown at the sides of the rectum.

original injury. The broad primitive wound-surface has contracted down into narrow lines more or less >——<-shaped, the lower extremities representing the position of the sphincter ends, the upper the commissure, and the transverse bar the lower margin of the recto-vaginal septum. The denudation must, therefore, be made to cover an area widely exaggerating the outlines of the scar-tissue.

The sphincter area is generally characterized by a shallow pit, often marked by little dimples at either extremity of the septum,

which presents a more or less sharp border, and beneath which pout a few tits of the deep-red rectal mucosa. Not infrequently this pouting is considerable, and has often been mistaken for hemorrhoids.

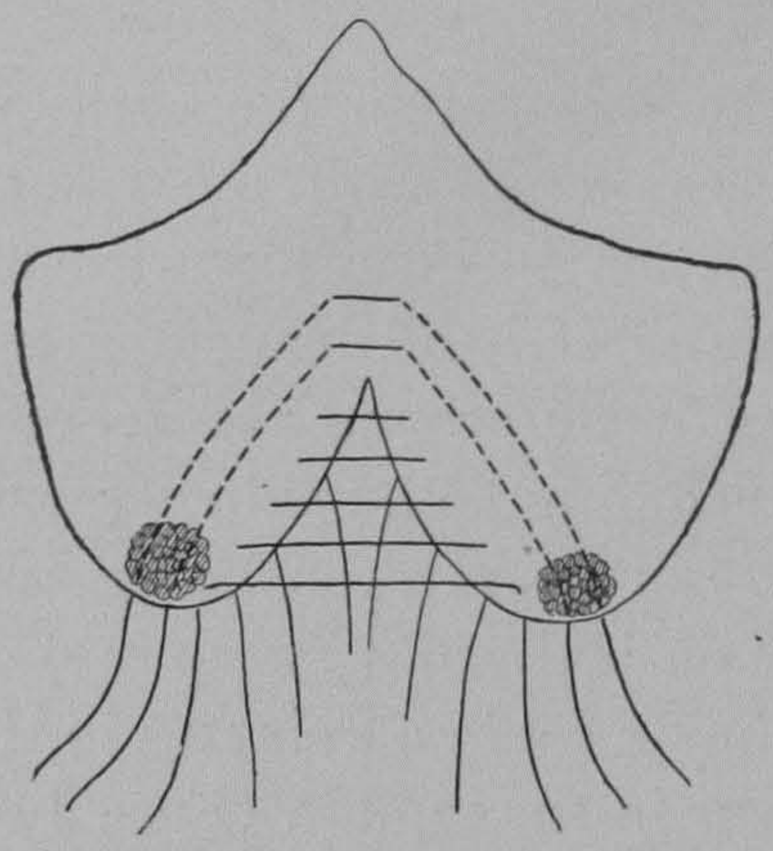
Before making the denudation the outlines of the area to be denuded must be mapped out with the point of a scalpel. This allows a rapid denudation to be made, without the error to which one is liable in making a free-hand denudation with the scissors alone. The first line may be made around the septum, splitting it at the rectal margin, and including both sphincter ends; this line is continued up on each side in a curve, convex backward to the nymphæ; from this point lines on both sides sweep into the vagina, along the lateral walls, until they meet in a point up in the vagina a half inch or more above the tear in the septum (Figs. 140 and 143).

The denudation is rapidly made with a pair of curved scissors and a tenaculum or rat-toothed forceps. The lower parts should be denuded first, so that that which follows is not obscured by the blood. The tissue is removed in long strips until the whole area is thus freshened.

The sutures are introduced much as described in the immediate operation. First, interrupted catgut sutures closing the rectal side of the tear from the angle down to the sphincter, radiating out on to the skin surface. The ends of the sphincter muscle are thoroughly exposed until muscular fibres are plainly visible. A tenaculum is hooked into each end of the muscle and the two ends brought together. A small catgut ligature is thrown about each end of the muscle and the free ends of the catgut securely tied. The muscle ends are thus surely approximated with no possibility of any other tissue coming between and preventing their union. The ends of the sphincter muscle are held together, and the catgut relieved of a tension it cannot stand by two silkworm-gut sutures introduced on the skin surface well behind one of the divided ends of the sphincter, passing directly through the end of the muscle itself, sweeping up around the septum-tear into the vagina, to emerge in the vaginal septum at a point well above the upper end of the septum-tear. The sutures are reintroduced at a point a slight distance from their point of exit, carried down the vaginal septum on the opposite side of the septum-tear, pass through the torn end of the sphincter and emerge on the skin surface at a point directly opposite that of their original entrance (Fig. 141).

The remaining sutures are passed, beginning at the upper angle of the denudation in the vagina, by introducing silkworm-gut

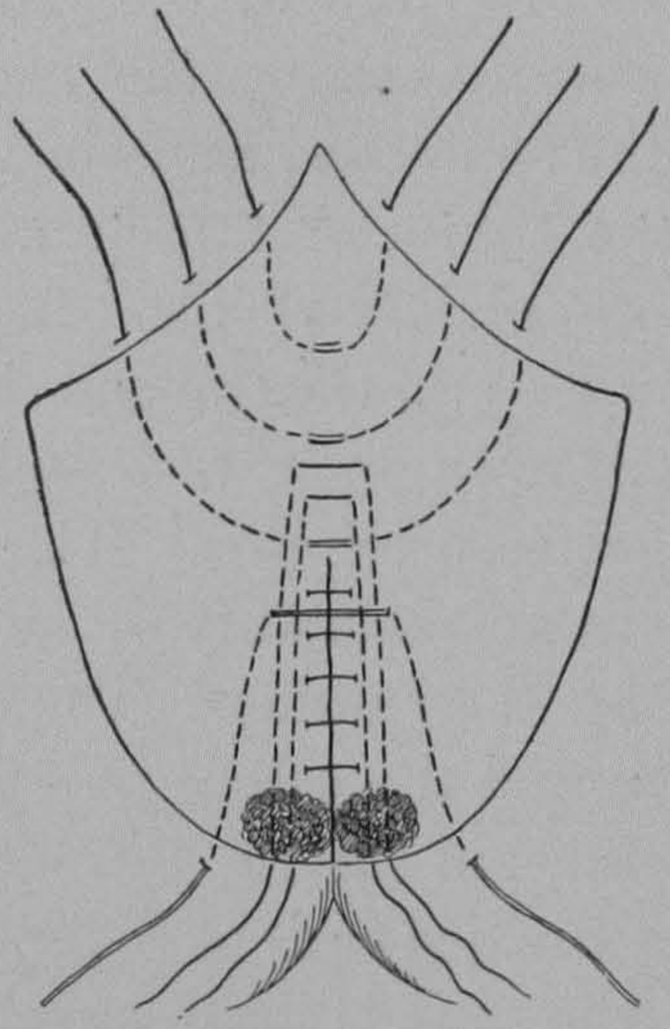
FIG. 140.



Rectal Sutures in Place, also supporting sutures passing through ends of Sphincter Muscle.

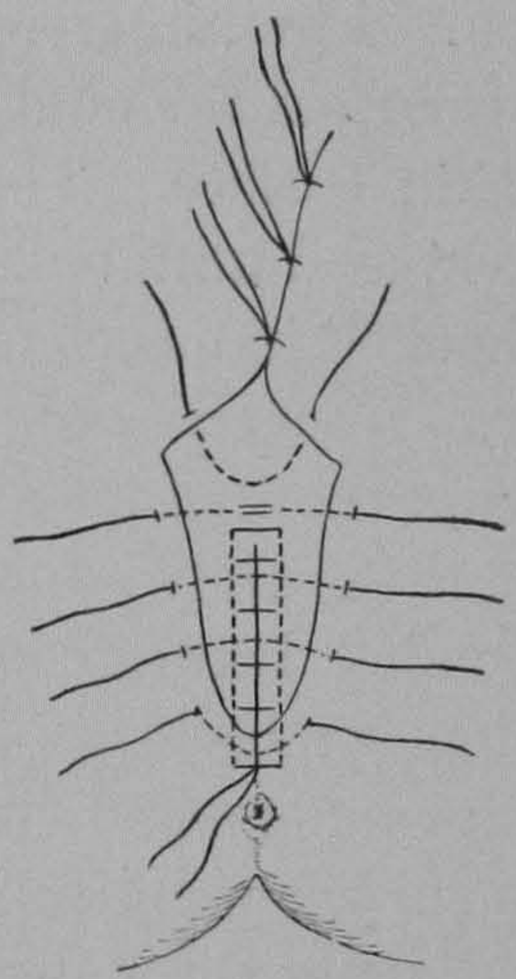
sutures about four to the inch, and extending from the vaginal mucosa down to the bottom of the septum. These sutures enter and emerge on the vaginal mucosa. They extend seriatim from

FIG. 141.



Rectal Sutures Tied, and Sutures supporting ends of Sphincter Muscle in place; also Vaginal Sutures.

FIG. 142.



Sutures within the Vagina Tied; external or skin Sutures in place, lowermost one passing through end of Sphincter Muscle; supporting suture tied.

the upper part of the vaginal denudation down over the commissure on to the skin to the lowest point (near the rectum) of the denudation. The lowest of these sutures is made to pass well behind and through the ends of the sphincter muscle, giving additional support and security against retraction (Fig. 142).

Before beginning the denudation it is necessary to first thoroughly stretch the sphincter, with the object of elongating it as much as possible, and to prevent its spasmodic contractions the first few days following the operation. When the operation is completed the parts should be sufficiently relaxed to allow of the easy entrance of the

FIG. 143. FIG. 144.

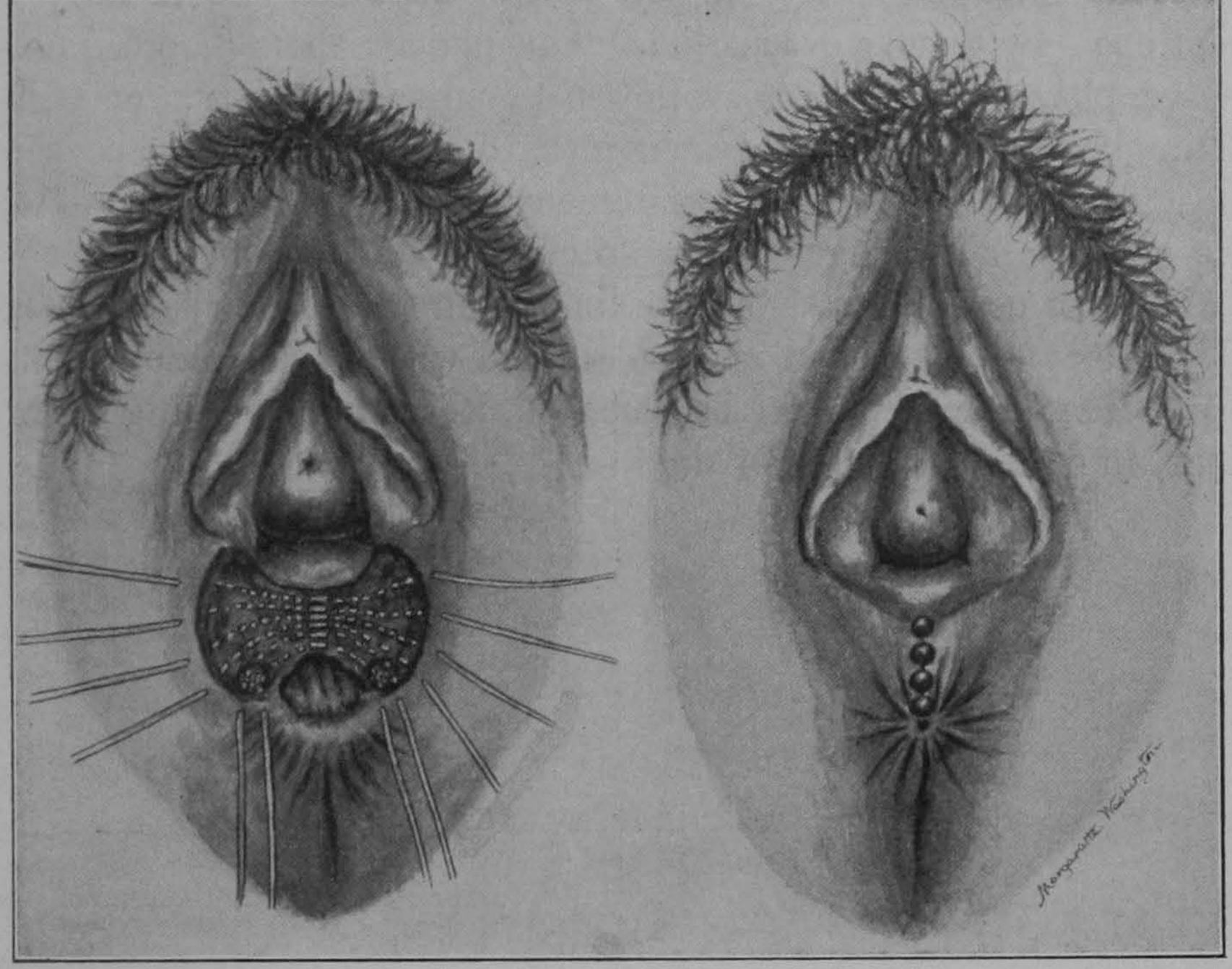


FIG. 143.—Denudation and sutures for repair of laceration. The two posterior sutures pass through the sphincter muscle.

FIG. 144.—Completed operation. The anal opening is surrounded by the sphincter. One shot has disappeared in the anus. The anterior suture is omitted.

little finger. Should the new sphincter be so tight as to make this in any way difficult, the operation will almost inevitably fail unless the tightness is at once overcome. A small tenotomy knife may be introduced through the skin directly over the posterior edge of the sphincter muscle, and its fibres divided by subcutaneous section to an extent to allow of stretching the sphincter sufficient for the easy introduction of the finger into the rectum. The most prolific causes of failure of this operation are neglect to secure proper stretching of the sphincter muscle and accurate approximation of the muscular ends.

After the completion of the operation the urine should be drawn, the vagina cleansed of blood and dried out with pledgets of absorbent cotton, iodoform and boric-acid powder sprinkled over the sur-

face and between the lips of the vulva, and a pad of loose absorbent cotton laid between the thighs and held in place by a T-bandage. The urine should not be drawn after the operation unless the patient is unable to pass it. Each time after urinating the vulva should carefully be dried with absorbent cotton, and powder, and fresh cotton applied. The bowels should be opened not later than the third, preferably on the second day, and should then be kept open by a daily evacuation. The patient should take a purgative pill or saline purge, followed by an enema in six or eight hours, if a natural soft movement does not follow. Extreme care must be observed in giving the enema not to allow the point of the syringe to impinge on the stitches in its introduction.

It is not necessary to bind the limbs; on the contrary, considerable liberty of movement may be allowed without separation of the legs. The sutures should be removed, as in the preceding operations, in from eight to ten days.