faces being perfect. The patient retained the recumbent posture for a week longer, to allow the cicatrix to get strong enough to resist any traction that might be made by the bladder, rectum, or uterus itself.

The uterus was held as nicely in its proper position by this bridle of vaginal tissue as it was previously by the tenaculum; and fortunately she was wholly relieved of the suffering symptoms, of which she had so long complained before the operation.

Twelve months afterwards this lady gave birth to a son. I saw her husband a year after the birth of the child, and he reported his wife as enjoying most excellent health, never having felt the slightest symptoms of her old troubles at any time since the operation. I am sorry to say I have performed this operation in but two other instances. I have seen many cases suitable for it, but they have been satisfied to put up with some clumsy mechanical contrivance rather than submit to an operation. As I have not seen the case above related since the confinement, I cannot say what effect the labour produced on the cicatrix, but I should expect to find it intact.

In 1859, a young lady aged twenty-six was sent to the Woman's Hospital with just such an anteversion as the one above related, except that the fibroid on the fundus of the uterus was much larger. She was a patient off and on for twelve months, and Dr. Emmet and myself exhausted all our mechanical ingenuity (and patience too) without producing the least benefit.

At last I proposed to her the operation above described, telling her at the same time that it had been done but once before. She readily accepted it; and the operation was performed in May, 1860, with perfect success, and with almost entire relief to all her sufferings. I have seen this young lady repeatedly since; the last time in July, 1862, being then twenty-six months after the operation, and the uterus remained just as it was when she first left the Hospital.

I performed this operation a third time in 1860, at the Woman's Hospital; the patient left soon afterwards, and as I have not seen or heard from her since, I cannot say what was its effect upon her health; but the operation, as such, was as successful in every particular as in the other two instances.

I would not be understood as recommending this operation as a universal one in anteversion. It is to be resorted to only when the anterior wall of the vagina is unusually long, and when the uterus lies down parallel with it, presenting the fundus just behind the inner face of the symphysis pubis.

Of Retroversion.—While the table on page 231 shows that about one-third of all sterile women have anteversion from some cause or other, it also shows that another third suffer from retroversion; although these two forms of displacement vary in the two classes of natural and acquired sterility; the anteversions, as before stated, predominating in the first, and the retroversions in the second.

The uterus is retroverted when the fundus falls backwards under the promontory of the sacrum or whenever it passes an angle of 45° in that direction from its normal position. But, as before said, it never stops at 45°, seldom at 90°, and often goes to 135°. Thus we may have different degrees of this version. We can ordinarily diagnose a retroversion by the bi-manual method of palpation, already more than once described; but if at any time we are in doubt, the

uterine probe will easily, and with great certainty, settle the point. If we find a tumour in the retro uterine region, and doubt whether it be the fundus of the uterus or not; and if we can pass the probe into it to the depth of two inches and a half, then it is the fundus; but if it pass two inches and a half or more in some other direction, then it is not the fundus. There is no need of our ever being in doubt as to a retroversion. The physical signs elicited by the touch and the probe are invariable and indubitable. I have already said so much on these two methods of diagnosis, that more is here unnecessary.

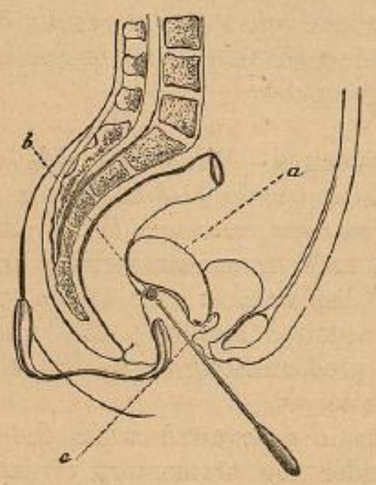

Fig. 99.

Fig. 89, page 228, represents the uterus in a normal position. Fig. 99 represents the uterus retroverted from its normal position *a* to an angle of at least 90°. In retroversions like this there is ordinarily a greater degree of vesical tenesmus than in anteversions. This is

explained by the fact that in the one the neck of the bladder is the seat of pressure, while it is the fundus in the other. The diagram represents the manner in which the neck of the bladder may be jammed against the symphysis pubis if the uterus is much hypertrophied. Here it is not relatively augmented in its long diameter. It also shows how awkwardly the fundus of the bladder is pulled back by its attachment to the cervix uteri, and how the cervix occupies the place, as it were, of the *bas fond* of the bladder.

It is possible in many instances to replace a retroverted uterus by manipulation alone, simply by pushing the cervix back with the index finger till the os looks in the direction of the hollow of the sacrum, and as the fundus rolls upwards, grasping it with the outer hand through the walls of the abdomen and pulling it forwards. We can thus often produce a complete anteversion of the organ. But it is not always easy to do this, particularly if the pelvis is deep, the uterus large, the vagina long, and the patient fat. It is then necessary to resort to instrumental aid, the simplest of which are two or three sponge probangs, with sponges not larger than the ball of the thumb.

For this purpose place the patient on the left side, as for all uterine operations, introduce the speculum, push one of the sponge probangs gently, firmly, forcibly into the posterior cul-de-sac, holding it there steadily till the cervix uteri is raised from its contact with the anterior wall of the vagina; then place the other sponge against the cervix anteriorly, and gently push it back towards the posterior cul-de sac, at the same time that the pressure is continued by the first one. This will generally roll the fundus over forwards, and elevate it from its bed in the utero-rectal pouch.

Thus let fig. 99 represent a retroverted uterus with the speculum and the first sponge probang *in situ*. The pressure with the probang must be made in the direction of the dotted line *b* under the fundus uteri, directly towards the hollow of the sacrum, or in other words, in the direction of the proper axis of the vagina. The tendency of this is at once to throw the fundus upwards, by tilting the cervix downwards and backwards. When this has been carried as far as possible, then the pressure of the second sponge against the anterior face of the cervix completes the rectification of the malposition,—provided we are careful to make the pressure in the right direction. If the handle of the sponge probang be carried far back towards the perineum or the blade of the speculum, in the direction of the dotted line *c*, it will strike against the cervix uteri or in the anterior cul-de-sac, and of necessity retrovert the uterus to a greater degree, by pushing the cervix upwards and forwards instead of downwards and backwards. But if the handle of the probang be kept close to the urethra, the pressure will be made in the direction of the line *b*, which necessarily causes the uterus to revolve on its own axis, the cervix taking the relative position just occupied by the fundus, while this rises up above the promontory of the sacrum. We shall generally, but not always, succeed in this simple way in restoring the uterus to its proper position.

If we produce any pain by this process, it will be in consequence of pressure against the hypertrophied tender posterior wall of the uterus, or against a prolapsed supersensitive ovary, or something else abnormal, in the Douglas cul-de-sac, all of which it is important to ascertain by the touch before making efforts at replacement. Then if we use two sponge probangs for

pressure in the posterior cul-de-sac instead of one, we avoid the production of pain; but instead of pushing the sponges back in a direct line, centrally over the os tincæ, we cross them, laying one on the left side of the cervix, and the other on the right, as shown in fig. 100, *a b*. They will naturally cross just over or very near the urethra. I have had them fastened together at the crossing, making one automatic machine of the two; but this does not answer so well, because we may sometimes need to change the point of pressure of one probang and not of the other. We may not only need to change the direction of the force, but we may also wish to use more or less with one than the other; and we can do all this with greater facility with the two sponges as they are.

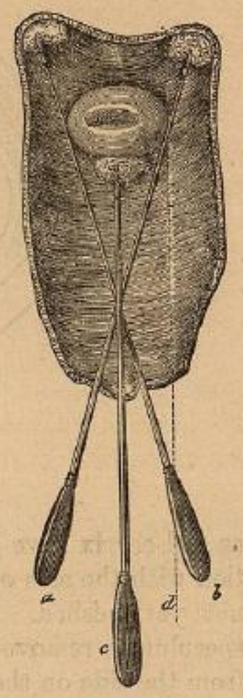

Fig. 100.

For instance, suppose we wish to change the pressure of the probang *a* more to the left, the handle is at once thrown to the right and it takes the direction of the dotted line *d;* and in like manner we may act with *b*. When we are satisfied that the fundus has been rolled up out of its old bed, which is to be presumed when the os tincæ looks directly back towards the posterior wall of the vagina, instead of towards the symphysis pubis, then we are to apply the probang *c* against the cervix, and push this in a straight line backwards.

Fig. 101 shows the uterus somewhat elevated from its abnormal position, towards the promontory of the sacrum. We may push the organ up thus far, and suppose that we have reduced the dislocation, because the

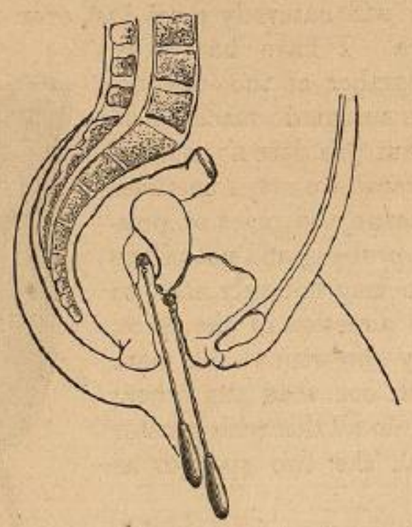

Fig. 101.

os and cervix have been forced back into a normal relation with the axis of the vagina. But the operation is not yet finished. Holding the sponges in position, the speculum is removed, and the patient requested to turn from the side on the back; then pass the left index finger into the vagina, and place it against the anterior face of the cervix; hold it firmly there, and remove the sponges, one at a time; then while the cervix is still pushed backwards by the finger, bring the other hand to make the outer pressure (bi-manual). If we can with this grasp the fundus of the uterus, and bring it towards the symphysis pubis, then we are sure that we have succeeded; if not, we have only crowded the cervix backwards, flexing it upon itself and leaving the fundus in its abnormal position, almost as it was before (fig. 102).

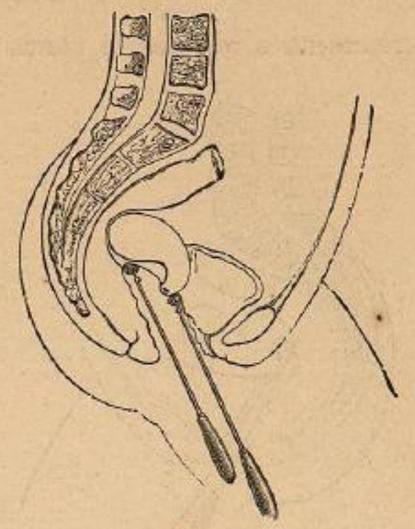

Fig. 102.

This is more apt to happen when the pelvis is deep, and the supra-vaginal portion of the cervix is long and slender. If our patient is too much fatigued to change her position to the dorsal decubitus for the bi-manual examination, we can ascertain the degree of success of the effort at replacement by passing the uterine sound while the patient is still on the left side. If it pass easily the proper distance in the direction of the normal position of the uterus, then it is all right; bnt if it pass back towards the hollow of the sacrum, then it is all wrong.

It is better not to fatigue our patient too much, and if we do not succeed to-day, it will be as well to wait

till to-morrow. When we attempt anything of this sort, we must always be sure that the bowels are not constipated; and we must not forget to have the bladder emptied before trying to reduce the dislocated uterus.

Fig. 103 represents a retroverted uterus completely

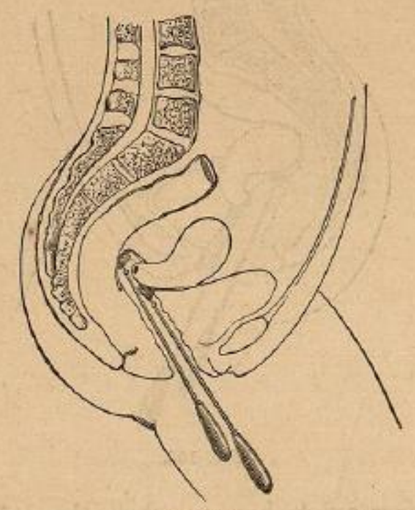

Fig. 103.

restored to its normal position by the pressure of two sponge probangs alone.

We often succeed by the simple process above detailed; but suppose we fail in our second effort, or suppose we are in doubt about adhesions binding the fundus down in its abnormal position, what are we then to do? We then proceed otherwise; and it is here absolutely necessary to use an intra-uterine force.

Dr. Simpson was the first to teach us how to diagnose, and how to rectify a retroversion. He passes his uterine sound to diagnose the position, and then turning

it half a circle, the retroverted fundus is necessarily elevated towards the promontory of the sacrum. But as I have frequently said before, this operation often produces great suffering, and sometimes hæmorrhage, and I have not for many years used Simpson's sound as a redresser. I have not seen any more serious accident from it. Some object to the instrument, and ostracize it altogether; because perforation of the fundus and death have followed its injudicious use. This is not wise or logical. I object to it only as a redresser. Its whole principle of action is wrong; and hence the pain and suffering it produces. I only wonder it has not done greater mischief. Let us for a moment look at its *modus operandi*.

Fig. 104 represents a retroverted uterus with Simp-

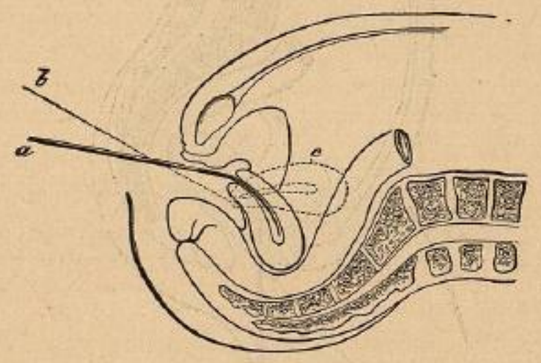

Fig. 104.

son's sound introduced as a redresser. Now, if we turn the handle of the instrument *a* on its own axis half a circle, the distal end will elevate the uterus from its abnormal position to that shown by the dotted figure *c;* but in doing this it will describe a semicircle of but little less than two inches and a half radius,

sweeping the fundus round with the whole weight of the organ, supported principally on the very end of the instrument, which in its gyration changes its point of pressure from the posterior to the anterior face of the uterine cavity. To elevate the fundus still more, we push the handle *b* back towards the perineum, which thrusts the uterine end upwards. Is it to be wondered at, then, that we occasionally meet with patients who look upon the uterine sound with the most painful recollections? Seeing that an intra-uterine force was occasionally absolutely necessary for the rectification of this malposition, I devised the following instrument in

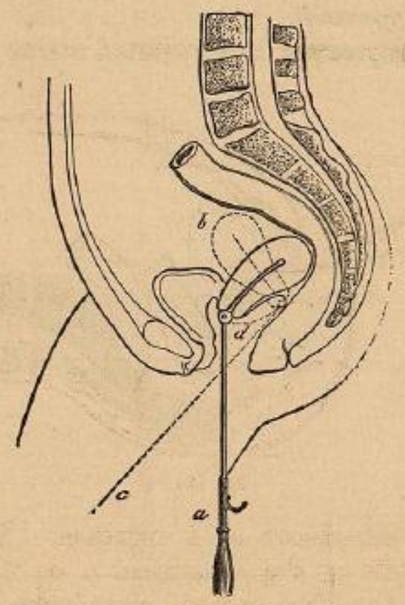

Fig. 105.

1856, and have used it ever since. Its whole principle of action is that of elevating the fundus in a straight

line instead of a circle, and of supporting the weight of the organ on a disk at the os tincæ instead of the distal end of the instrument at the fundus. For this it is only necessary to make a joint or hinge in the sound, about two inches from its uterine extremity, and fix a disk or plate there, as a point of support for the weight of the uterus. For instance, let fig. 105 represent a retroverted uterus, with a jointed sound *a* introduced, the joint being at the os. Now all that we have to do with such an instrument is to push the mouth of the womb downwards and backwards into the posterior cul-de-sac in the direction of the place which was at the inception of this movement occupied by the fundus. By this manœuvre the os tincæ describes the small arc of a circle represented by the dotted line *d*, while the fundus, being elevated in a right line, describes a larger one, and takes the position *b;* the handle or shaft of the instrument being represented by the dotted line *c*. If the instrument be properly adjusted, this operation is effected without suffering to the patient or injury to the uterus. If there are adhesions, we can measure very accurately their resistance and extensibility. I now remember two cases in which from this cause it was impossible to elevate the uterus more than 45° above the axis of the vagina.

Fig. 106 represents the uterine elevator with the uterine stem A set at an angle of 45°, being the proper angle for an ordinary retroversion: C is the ball or disk for the support of the weight of the uterus. It revolves on its own axis in a line with the shaft, permitting the stem A to describe a whole circle, except 90°,—45° on each side of the shaft. This ball is perforated with seven holes (the stem occupying the eighth), made in a line around its centre, for the reception of a pointed

rod, concealed in the tubular shaft, which is pulled down by the ring B, and flies back again when we let the ring go, so that the movements of the uterine stem A can be promptly arrested at any desired point in its elevation, simply by letting go the ring B, which, with the rod, is driven up by a hidden spiral spring in the handle below. The little perforations in the ball are placed intentionally at the proper distances to mark off angles of 45° in the revolutions of the stem.

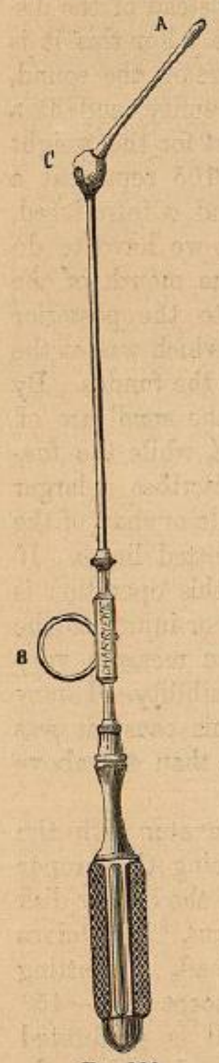

Fig. 106.

This instrument is simply Simpson's sound with a joint or hinge two inches from its uterine extremity; but its modus operandi is very different. One elevates the uterus in a right line; the other in a circle to the right or left: one supports the weight of the organ on a ball at the os; the other principally on the point of the sound in the uterine cavity: one elevates the uterus by a power exerted on the cervix; the other by a like power on the fundus: one seldom produces pain, the other often does.

This instrument is sometimes valuable in assisting us to diagnose the relative position of small tumours on or near the uterus. Thus, suppose we have the uterus impaled with the stem A at

right angles with the shaft, its body being thus held firmly in the centre of the pelvis, with the fundus pointing to the umbilicus,—by pulling the handle of the instrument forwards while it is thus rigidly fixed, we can draw the body of the uterus towards and very near the inner face of the symphysis pubis; by pushing it back, we can carry it directly backwards as far as the depth of the vagina and the sacral promontory will allow it to go; by turning the handle from side to side, we can at will throw the fundus to the right or left, as we please, and all this without injury to the organ itself, for its whole weight is supported, as before said, not on the point of the instrument, as when we execute any of these movements with Simpson's sound, but on the disk at the os tincæ; and while we are thus changing the position of the uterus, we can by a finger in the vagina or rectum, and by palpation externally, determine whether any suspected tumour be attached to the uterus by sessile adhesions or by ligament only, or whether the two be entirely separate and independent of each other. The intra-uterine portion of the elevator is malleable, because we may sometimes wish to curve it a little to suit the peculiarities of some special case.

Ordinarily this stem should not be more than two inches long. It should never be long enough to touch the fundus uteri by any possibility. In its use we should be careful to keep the ball or disk always pressed well up against the os tincæ; for if it should slip down half an inch or more, we shall fail to elevate the fundus, as the whole power of the instrument will then be expended only in pushing the os tincæ backwards and doubling the cervix on itself.

I published an account of this uterine elevator in the

January number of the *American Journal of the Medical Sciences* for 1858; and since then it has been variously modified by different writers, but not at all improved. Dr. Gardner and Dr. Dewees, of New York, and others, have added a screw to move the stem, which is objectionable, because it robs us of the faculty of determining the power of resistance by the sense of feeling. When we have a freely movable joint, as in this instrument, it is easy to judge of the weight of the uterus, and to determine the amount and degree of adhesions, when present, by noting the exact point at which we feel their resistance.

But suppose we elevate the uterus, whether by this means or any other, will it remain in its normal position simply by placing it there? Never. I have known physicians to replace a retroverted uterus day after day for months, but I never knew a case cured by it. It is certainly important in many cases to rectify the malposition, but more than this remains to be done to render it permanent. For this purpose the organ must be not only replaced, but it must be retained in its normal position by some mechanical means. In old cases, where the uterus is tender and irritable, it will be well not to resort to a pessary at once. It is better to replace the uterus a few times and apply simply a wad of cotton wet with glycerine, for the double purpose of supporting the uterus *in situ* for a while, and of removing engorgement by the depleting power of the glycerine already described (pp. 71, 72, 158). Whenever by this means or others we remove all irritability or engorgement that may have been present, we must adjust a pessary of some sort to hold the organ in its normal position.

Much has been written on the subject of uterine displacements, and very opposite views have been entertained of its treatment. Some look upon it as a matter of no great importance, while others are ready to attribute to it every nervous symptom that the patient may suffer. Some condemn pessaries and ostracize them altogether, while others advocate them perhaps too universally. Like most disputed points, there is some truth on both sides. I have seen much harm produced by pessaries, and so have I by bleeding, by purgatives, by opium, by quinine, and by other powerful remedies; but I do not see why we should wholly repudiate remedies or instruments because they have been used injudiciously. I have also seen much benefit from the application of the principles of mechanics to the treatment of uterine displacements, but I am well aware that there are circumstances under which they are inapplicable.

I have seen cases in which Simpson's intra-uterine stem (fig. 107) had produced very serious results, such as metro-peritonitis. I have seen Hodge's open lever pessary (fig. 110) dig holes in the anterior walls of the vagina almost through into the bladder. I have often seen Meigs's ring-pessary (fig. 111) cut a sulcus in the posterior cul-de-sac of the vagina deep enough to burrow the finger in. I have seen Zwang's pessary (fig. 108) sever the urethra from the neck of the bladder, cutting quite down to the vesical membrane, but not through it. I have known one case where the disk of a vaginal stem-pessary (fig. 109) passed into the cavity of the uterus, and remained incarcerated there for several days, with the cervix closely contracted around the stem, till it was removed by Professor Lewis A. Sayre, of the Bellevue Hospital College, New York; and I have seen Gariel's India-rubber bag-pessary inflated till it distended the

Fig. 107.

Fig. 108.

vagina so enormously that it seemed to occupy almost the whole of the pelvic cavity; and I have heard of other pessaries producing fistulous openings into the rectum and the bladder. But notwithstanding all this, I advocate and daily use pessaries in some form or other; because, if I did not, I should turn away a multitude of cases without doing anything at all for their relief. Pessaries are necessary evils. We should always do without them if possible; but if it be impossible, then it is the part of wisdom to resort to such appliances as will best answer the indications of the individual case.

Fig. 109.

The man who is not a mechanic should never trust himself to use a pessary. Even with a correct understanding of uterine mechanology, we will often make mistakes,—

1st. In resorting to pessaries where there is metritic inflammation in some form.

2nd. In selecting an inappropriate instrument.

3rd. In making it too large; sometimes too small; and

4th. In allowing it to remain too long without removal.

Even if we feel pretty sure of the form of the instrument as applicable to the case, it is difficult for us to get our ideas of the size of the vagina down to a proper level. We more frequently make them too large than too small. After we succeed in getting the pessary to

fit accurately, we should never send our patient off till she is taught to remove and replace it with the same facility that she would put on and pull off an old slipper. A pessary is a thing to be worn like a glass eye, only when awake. As a rule, it should be pulled off at night, and put on in the morning, if needed; and if every poor woman who is compelled to use such an aid for the support of the uterus, was always taught to understand the principles of its action, and to remove and replace it every day or two, there would be none of the accidents alluded to above, to damage their reputation for usefulness. But the greatest mistake that we make is that of taking a single model and applying it universally. What would be thought of the hatter who expected one hat to fit every head? Of the shoemaker who expected one shoe to fit every foot? Of the dentist who expected the cast of one alveolar arch to fit every other? The idea is most preposterous; and yet we have been but little less wise in our mechanical treatment of uterine displacements.

I have seen the inside of an immense number of vaginas, and I never saw two that were in all particulars exactly alike. They are as different from each other as are our faces and noses. In Mr. Préterre's (of Paris) great collection of palatine fissure-casts, numbering now some 600 or more, each one has its peculiar anomalies, and each its peculiar apparatus. I would not be understood as meaning that 600 cases of uterine displacement would need as many differently constructed instruments; but I mean this, that every individual case is a study of itself, and that its complications and peculiarities must be investigated, understood, and respected, if we expect to treat them safely and successfully. But as I intend to deal here with pessaries only in relation with the

sterile condition, further general remarks are uncalled for.

I do not pretend to say that a retroverted or an anteverted uterus is incapable of conception; but of this I am certain, if conception occurs when the uterus is greatly anteverted or greatly retroverted, it is rather accidental than otherwise, and would have occurred with greater facility if this organ had been in a normal position, other things being equal.

When we call to mind the fact that of 255 cases of acquired sterility (page 231), 111 had retroversion and 61 anteversion; and of 250 cases of natural sterility, 68 had retroversion and 103 anteversion, we may have a right, as I have said before, to suspect that the position of the uterus is a matter of some importance in the treatment of the sterile condition. Of course many of these cases of malposition were complicated with fibroids, or flexures, or engorgements, or hypertrophies, or a conical cervix in those who have never borne children. But even if all these be rectified, we may still have sterility as a consequence of malposition alone. At all events, the frequency of malposition renders it an important element in the treatment of the sterile condition.

Although I have been for a long time aware of the fact that malposition of the uterus had much to do with sterility, I never had the slightest idea of treating this last in connection with the malposition till 1855; and it occurred to me in this way. I was consulted in July, 1855, by a lady who had been under the treatment of Professor Hodge, of Philadelphia. The history of her case gave the following facts. She was twenty-three years old, married at seventeen, in July, 1849; had a two months' miscarriage in March, 1851,

from which she slowly recovered, and was sent to Professor Hodge by her medical attendants in May following. He found the uterus retroverted, and applied his pessary immediately. She remained in Philadelphia seven weeks; had but one menstrual period after the pessary was applied; and returned home still wearing it. Her physicians there pronounced her pregnant, but did not remove the instrument till September, and her child was born in March following. This appeared to me at the time a most remarkable revelation; and I asked this lady how it happened that she had sexual intercourse while she wore an instrument. She replied simply, "It happened so." "Often?" said I. "Oh, yes; just as if there had been no instrument there." The idea of adjusting an instrument that would permit sexual intercourse at the same time that it held the uterus *in situ* was to me a novel one. Since then I have acted upon it, and think it of great importance.

Hodge's instrument, as first invented by him, is made of silver and then gilt. It is in the shape of the letter U, with the two parallel branches curved on the flat to suit the curvature of the vagina.

Fig. 110 represents the instrument. The cross-bar connecting the two branches is to be pushed up behind the cervix uteri after the organ is replaced; the great convexity of the branches rests on the posterior wall of the vagina; and the open end looks in the direction of the symphysis pubis; while the extremities of the branches rest anteriorly, one

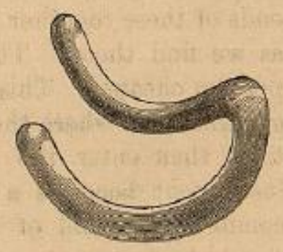

Fig. 110.