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Contributors

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UTERINE DILATATION

WITH

A NEW INSTRUMENT.

BY

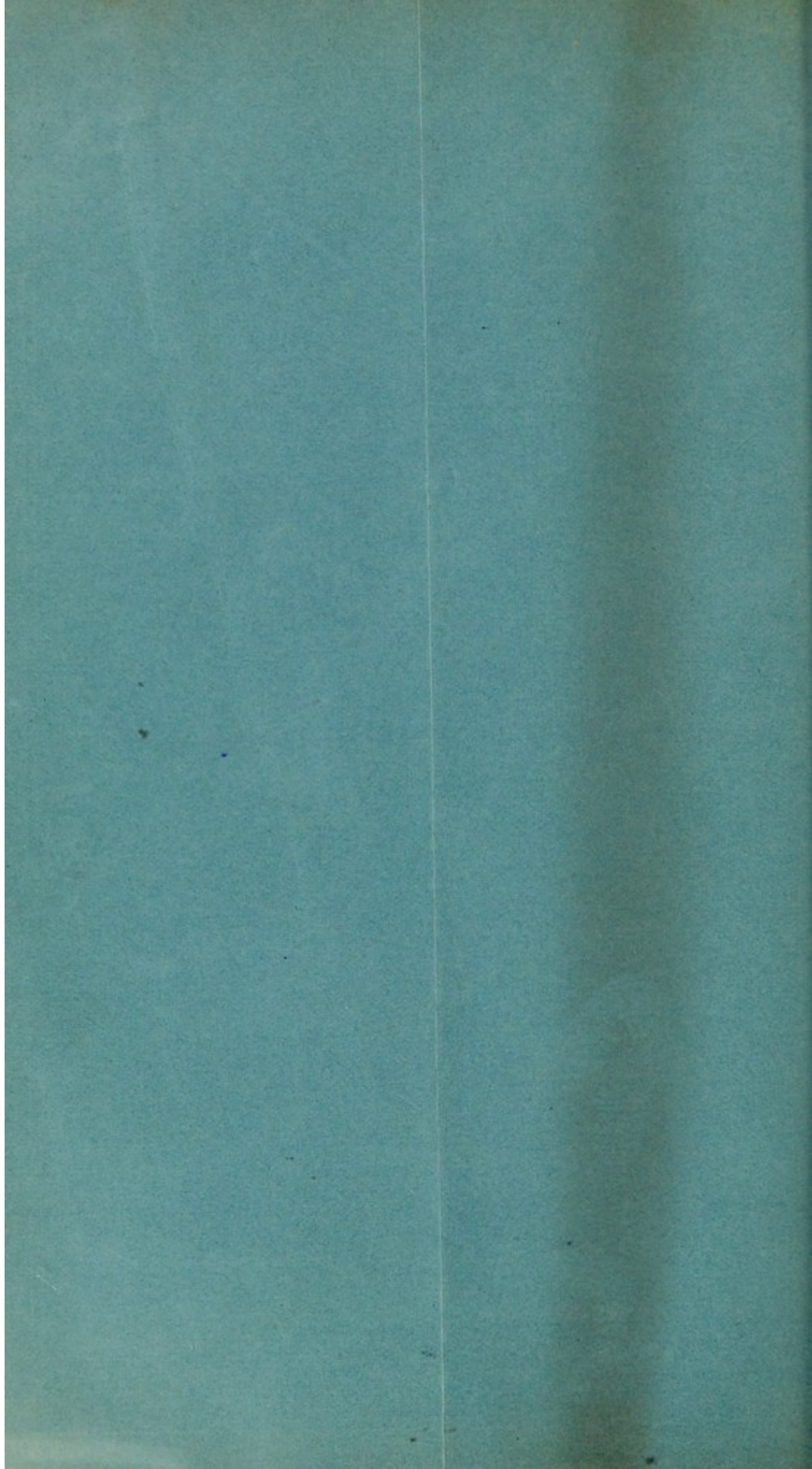
H. P. C. WILSON, M.D.,

OF BALTIMORE.

Formerly President of the Medical and Chirurgical Faculty of Maryland,
and of the Baltimore Academy of Medicine; formerly Vice-
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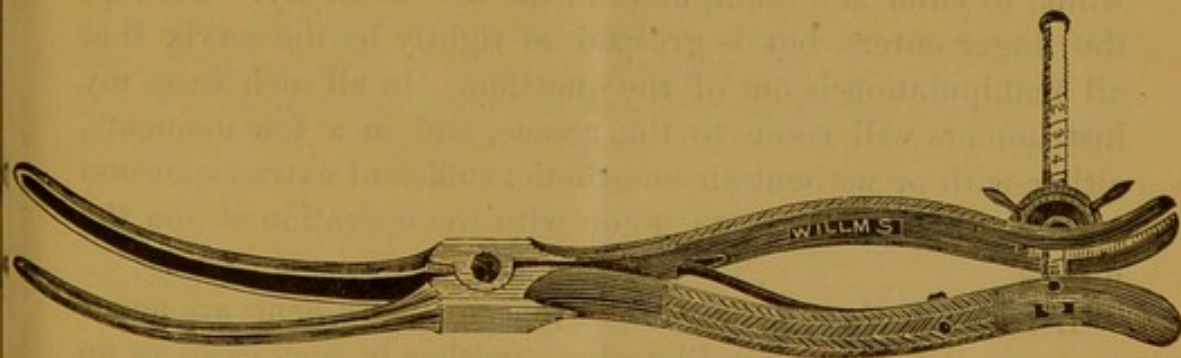
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I DESIRE to call the attention of obstetricians and gynecologists to a set of uterine dilators which I have devised, for taking up dilatation of the uterus where most other such instruments leave off, and for completing dilatation sufficiently in a partially dilated or dilatable uterus, for manipulative interference in its cavity. They are three in number; only differing from each other in size and power; and we use one or the other in proper cases, as we want more or less dilatation.

This instrument is composed of two blades, which we call a



male and female blade, or a left and right-hand blade; a joint, about one-third up from the dilating end, fixed by a screw; a spring between the handles upon which to exert the expanding power; a screw-stem attached by a hinge to the handle of the left-hand blade and fitting into a notch at the end of the handle of the right-hand blade. Upon this screw-stem is fitted a female screw, and its flat surface is divided into centimetres, so that in compressing the handles with the hand in making dilatation, and moving the female screw against the right-hand handle to fix the dilatation gained, we can tell by observing the centimetres on the screw-stem just how much expansion of the uterus has been accomplished. The right-hand blade below the joint is a little larger and longer than the left,

and is concave on its inner surface up to within a centimetre of the end, where it becomes convex and blunt-pointed. The left-hand blade is shorter than the right, and convex on its inner surface, so that when the blades come together, the left-hand or male blade folds within the right-hand or female blade. Thus we get a very small circumference for introduction into the cervical canal in comparison with the dilating power of the instrument.

It is as simple in its construction and mode of application as a lady's glove stretcher; and if used with the same discretion and gentle manipulation with which a lady stretches the fingers of her glove, it will accomplish for the uterus what she accomplishes for her glove—a little more room to slip the finger in; but if undue force is used, or even moderate force, on a uterus not dilatable, the result will be the same as to the lady who uses with her stretcher undue force, or even moderate force, to unyielding kid—she will split her glove.

All of us who have practised obstetrics and gynecology have so often felt how much we would give for one-eighth or one-sixteenth of an inch more room in a cervical canal through which to enter and manipulate in the uterine cavity. Perhaps the finger enters, but is grasped so tightly by the cervix that all manipulation is out of the question. In all such cases my instruments will come to the rescue, and in a few moments, either with or without an anesthetic, sufficient extra-expansion is gained to enable us to go on with the operation within the uterus.

Let it be *distinctly remembered* that my instruments are never to be used for primary dilatation; neither in such cases as an elongated, indurated, and conical cervix, nor in a hyperplastic, indurated, and non-elastic cervix. For their use, the cervical canal must always be partially dilated, or soft, pliable, and dilatable. In these cases every practitioner in the diseases of women will find my dilators to serve him a good turn, and enable him often to accomplish that without which he would fail.

Perhaps he has used one sponge-tent, or one or two laminaria, tupelo, or corn-pith tents; perhaps with either of these the cervical canal is dilated only enough to allow the finger to partially enter, but the cervix is soft and pliable from the tent; then my dilators, with or without chloroform, will probably complete the expansion sufficiently to allow satisfactory explo-

ration of the uterine cavity, without subjecting the patient to the delays and dangers of a second or third tent.

In my experience, all the ill results have followed the use of a second, and much more the use of a third tent, and any instrument by which we can safely save a patient from a first or second repetition of this dangerous means of dilatation will be a great blessing to the physician, and a greater blessing to his patients.

Often we meet with cases where there are remains of an old pelvic cellulitis, where the broad ligaments (one or both) are thicker than they ought to be, and the uterus does not swing in the pelvis with the freedom it should. The cervical canal is partially dilated, but not enough to admit the finger. It is necessary to explore the cavity of the uterus. To introduce a tent in such a case, and allow it to remain twenty-four hours, as we should have to do, would incur much more danger in lighting up acute pelvic cellulitis than to give chloroform, and carefully and slowly dilate with my instruments sufficiently for a digital exploration.

To illustrate :

A lady, the mother of nine children, was, a few months since, placed under my care by a most excellent physician of this city. She had been bleeding more or less for some weeks, and was much exsanguinated. She and her physician had misgivings that she had miscarried at about three months of pregnancy, but they were uncertain. No fetus had been discovered, and no afterbirth had appeared. She had the remains of an old pelvic cellulitis. The cervical canal was partially dilated, but not enough to get my finger in. I had not then completed my dilators. I was afraid to use tents. Ergot was freely given. The uterus was mopped out with iodine and iron from time to time, but with no permanent benefit. The bleeding continued more or less constantly, and the patient was daily growing weaker. Just then I received the rough cast of my dilator, and with it I was able in a few minutes to expand the cervical canal, so that my finger passed readily into the uterine cavity, where I discovered an adherent placenta. I raked it away with the finger-nail—"the hand as a curette." The uterus was washed out with warm carbolized water, and then mopped out with subsulphate of iron and glycerine as an antiseptic. The patient had no further trouble, but rapidly regained her health.

Thus I accomplished with these instruments in about ten minutes what I had failed to do by other means in several weeks. Under chloroform, I thus escaped the dangers of a tent, viz. : nervous shock—more or less severe pain for twenty-

four hours—the generation of a septic fluid, bathing an abraded surface ready to absorb it, and the lighting up of an acute upon the remains of a chronic cellulitis.

These factors, being in force for twenty-four hours, would have multiplied dangers to the patient far above those from rapid dilatation under chloroform, in a dilatable cervix. I was assisted in this operation by Drs. Robert T. Wilson and Wm. P. Chunn.

This instrument will be found of great use in those cases of abortion where the fetus has been expelled and the placenta is retained, and perhaps is adherent, with the uterus closed. In most cases of abortion the cervical canal will be found sufficiently dilated for the obstetrician to pass in his finger and deliver the placenta. He has no difficulty, or if he has, it is overcome by the liberal use of chloroform. But now and then we meet with a case where the finger cannot enter, but the cervix is pliable and dilatable. Slow and careful dilatation with my instruments, under chloroform, will, in every such case, enable the finger to pass into the uterus, and separate and deliver the retained placenta.

We shall thus at once escape all danger from profuse and repeated hemorrhages, by which the patient's health is so reduced that she is months in recovering. We escape the dangers of septicemia from a decomposing, retained placenta; the dangers of an endometritis from the continued presence of such noxious and irritating matter in the uterine cavity; and we escape the danger of being censured for allowing an "after-birth" to remain undelivered. Prompt delivery of the placenta should follow the escape of every fetus.

These dilators will also be found most useful in cases where we are compelled to induce premature labor or perform rapid delivery; and in such cases as those, where the uncontrollable vomiting of pregnancy or a placenta previa is threatening the life of the patient, and the cervical canal is not sufficiently open for the insertion of a Barnes' dilator, and in cases of puerperal eclampsia, where the indications are to deliver speedily. In all such cases, these dilators, used in cautious and intelligent hands, will greatly promote the rapid expansion of the cervix up to the point where Barnes' dilators will more efficiently complete the work.

Objection has been made to my dilators, that they are powerful instruments and capable of doing great damage by lacerating the cervix uteri. This is true, but the answer is, that most surgical instruments, which are powerful for good, are also powerful for evil when used by unintelligent and unskilful hands. Nothing can do more danger to a patient than a scalpel, or obstetrical forceps, when used without knowledge, without judgment, without caution. Dilatation, with my instruments, is to be made, not by a blind mechanical force as a screw, etc., but by an intelligent hand, which can discern how much resistance is in the cervix, and how much force can be safely exercised in the particular case. The screw is only to fix the dilatation at a point where it can be safely borne, and there allow it to remain till the yielding muscular fibres allow a little further expansion.

Again, it has been objected that if the instruments do not lacerate the muscular tissue of the cervix, they will at least lacerate the cervical mucous membrane, and any septic matter within the uterine cavity, as from a decomposing placenta or fibroid tumor, would run down over this abraded surface and produce septicemia.

This position cannot be maintained against rapid dilatation (when we disinfect immediately with carbolic acid or subsulphate of iron) with anything like the force that it can against the slow dilatation of tents, where the surface is abraded and bathed in septic matter for at least twenty-four hours before it can be disinfected.

These objections are untenable, always remembering that my dilators are only for use in a partially dilated cervix—or in an evidently dilatable cervix—to be used not with blind force but by an intelligent hand, and with all that caution which distinguishes every successful surgical operation.

That mechanical dilatation of the uterus for diagnosis and therapeutics is frequently necessary in gynecology and obstetrics, is an axiom beyond all cavil. The only question is, how it can best be done, with the least discomfort and danger to the patient. Conditions arise within the uterus which we must get at and remove, or we consign our patient to an invalid's bed or a premature grave.

In a virgin uterus, which has never been dilated, or in a hyperplastic indurated cervix with the minimum of elasticity, I

believe a sponge-tent is the best means with which to commence dilatation. With one such tent remaining twenty-four hours in utero, we may so dilate and soften down the cervix as to be able to accomplish sufficient dilatation on the second day with my dilators. If not, I would follow up the sponge with a laminaria or tupelo tent. On its removal, my instruments will certainly supply all the room needed for entering and manipulating in the uterus.

I believe that no mechanical treatment of the uterus is fraught with more danger than the use of tents, and especially sponge-tents, and every tent from which we can save the patient is an additional security to her. The evils resulting from tents in my hands have always followed the second or third, never the first; and if with one tent we can so soften and expand the cervix as to complete the necessary dilatation with such instruments as mine, we shall accomplish much for the safety of our case, especially when used, as they should be, under anesthetics. In passing I may remark that no tent should be used without dipping it in carbolic acid and glycerine just before insertion, and previously mopping out the cervical canal with the same; and no sponge-tent should be used without being wrapped in gold-beater's skin, which should be punctured at various points to admit moisture to the sponge. This valuable suggestion originated with my friend, the late Dr. J. C. Nott. No tent should be removed without washing out the cervical canal with carbolized warm water, and mopping the same with carbolic acid and glycerine.

The means for dilating the canal of the cervix uteri are as numerous as the varied indications which call for the same, and when we remember that the uterus is physiologically and anatomically constituted for dilatation, as well as contraction, it is not wonderful that all the means invented for expanding this organ should be found useful in certain cases. Neither with Peaslee's graduated sound dilators, nor with Hanks' olive-shaped hard-rubber dilators, have I had any success. No doubt they are useful in the hands of those who manipulate them more skilfully than I do.

In rigid non-dilatable uteri, I prefer a tent first, and rapid steel dilators afterwards. In dilatable uteri the tent may be dispensed with, as steel dilators will accomplish the result; first using Ellinger's, or Palmer's, or Miller's, or Nott's, or Ball's,

all of which are good up to a certain point, but, owing to the spring in their blades, they have little dilating power. Then complete the dilation with Ellwood Wilson's, with Sims', or with mine.

My objections to Ellwood Wilson's instrument are, that the blades are at too acute an angle with the shafts; that blade fits against blade, instead of folding one within the other, by which we get equal force with reduction of size and facility of introduction into a narrow canal; that the handles are nearly at right angles to the shaft, instead of straight. Those conditions make his instrument more difficult to manipulate when the os uteri has been steadied and straightened by a tenaculum, as it always should be before introducing the dilator.

Sims' dilator is certainly a most ingenious and valuable instrument. My objections to it are, that it is complicated, trivalved, square-pointed instead of probe-pointed, and too short from the shoulder to the point of introduction, so that in some cases it does not pass far enough into the uterus to dilate the lower portion of that organ, as in the case of a small sessile fibroid tumor situated at the fundus of the uterus.

Both the above instruments have great merit. I claim for mine simplicity, ease of introduction into a comparatively narrow canal, and as far into the uterine cavity as may be desired, and facility of manipulation, by which we can dilate the cervical canal and lower portion of the uterus in every direction by rotating the handles.

When dilatation is demanded beyond the capacity of these instruments, we must supplement them with Emmet's water-bags, or Barnes' dilators. I have never found Molesworth's water dilators of practical use in my hands. They are usually out of order when wanted.

In closing, let me repeat what I have already said, that my dilators are never to be used, except in a *dilatable or partially dilated uterus*. So frequently in my life have I been placed in positions where I would have given anything for one-sixteenth of an inch more room, that I feel, my professional brethren, with similar experiences, will receive with leniency another instrument which commends itself for its simplicity and efficiency in just such cases.

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