Contributions to practical gynecology : illustrated with sixteen wood engravings / by S. James Donaldson.

CONTRIBUTIONS
TO
PRACTICAL GYNECOLOGY

DONALDSON

The Compliments
of the Author

CONTRIBUTIONS

TO

PRACTICAL GYNECOLOGY.

ILLUSTRATED WITH SIXTEEN WOOD ENGRAVINGS.

BY

S. JAMES DONALDSON, M.D.,

FELLOW OF THE NEW YORK MEDICO-CHIRURGICAL SOCIETY, SURGEON TO GYNECOLOGICAL WARDS, WARD'S ISLAND HOSPITAL.

PART I.—PRACTICAL OBSERVATIONS UPON UTERINE DEFLEXIONS.

PART II.—PRACTICAL OBSERVATIONS UPON DYSMENORRHŒA.

Read before the New York Medico-Chirurgical Society.

NEW YORK:
TROW'S PRINTING AND BOOKBINDING CO.
1882.

To

WM. E. KEITH, M.D.,

THIS LITTLE BOOK IS DEDICATED AS A TOKEN OF

AFFECTIONATE ESTEEM

BY THE AUTHOR.

PREFACE.

The following pages embody the substance of two essays written for and submitted to the New York Medico-Chirurgical Society in April and May of 1882. I began these articles with no intention of presenting them in book form, and have only been encouraged to do so by the favorable criticism as well as the frequent requests of my professional brethren. Although they have exceeded the limits originally intended, much has necessarily been left unsaid, and I wish to express my consciousness of the manifest incompleteness of these papers. My chief desire has been to deal in as concise a manner as possible with fundamental practicalities only, and I have therefore avoided all obscure and elaborate speculation. These pages have done scarcely more than to trace an outline of the views entertained upon the subjects to which they refer. Many thoughts have flocked to my brain, only to be denied representation in words. I can only hope that the suggestive configuration which I have aimed to produce may awaken in other minds analogous thoughts. If these tracings can in any way be used as stepping-stones to a better comprehension of this most important study, my object will have been attained.

S. J. Donaldson.

315 Madison Avenue, New York, July, 1882.

PRACTICAL GYNECOLOGY.

CHAPTER I.

During the last twenty-five years no subject within the domain of medicine has received more attention than gynecology. This activity has been more especially marked within the past decade, which has given rise to a notable increase in the ranks of specialists in this department. The question naturally arises, to what is this activity due, and what are its indications? Is it a sign of the development of our nobler humanity in the behalf of those around whom centres all there is which makes life worth the living, or is it that, with the advancement of civilization and increase of luxuries, there is a proportionate growth of those ailments peculiar to women? If from the first supposition, it would be a matter of no mean congratulation, and not a few so regard the question.

Although we would gladly accept this interpretation, does not a broader discernment cast the balance in favor of that implacable law of compensation which, for every comfort, doles out a pain, for every gleam of joy gives back a shade of grief. That this decree holds true in the present instance seems easily demonstrated. Throughout the world America is known as the "paradise of woman," and gallantly have we merited this compliment through our fealty to the sex, for as a nation we are preëminently watchful and zealous in our efforts to protect their rights and comforts. No other country abounds in such luxurious homes, or so completely guarantees and encourages equal education and freedom of the sexes; nevertheless there exists, with all these privileges, a greater percentage of diseased women in this country than in any other. This condition cannot reasonably be charged to the medical men; for it is everywhere conceded that with American physicians has originated every improvement, operative or inventive, worthy of confidence, during the last fifty years, and the eyes of the gynecological world are turned hitherward for all that is progressive in this department. We would naturally be proud of this position we occupy, were it not that we are confronted with the adage, "Necessity is the mother of invention." Has it been the rod of this inexorable mother that has scourged us into the foremost ranks of our specialty, rather than our chivalrous spirit toward womankind? Moreover, it is now incumbent

upon us to ascertain how far we have succeeded in alleviating the sufferings of woman, and to what degree we have elevated her physical standard; for a spirit is prevalent among the older and more discriminating physicians that refuses to be satisfied with the mere enthusiasm and emulation of specialists, where the ends do not justify the means. To many of these conservatives the term specialist has become odious, while they positively assert that, with all our boasted progress, the general physical status of woman is not improving, but, on the contrary, is deteriorating. We would be glad to demonstrate to the contrary, but we must acknowledge that this frequent and unwelcome assertion is not without foundation. We have arrived at a very important epoch in this department; for not only medical men, but the world at large, have reached the parting of the ways and pause for divination, not a few being anxious to brand the gynecologist with causing much needless suffering and of having proved a curse rather than a blessing. That remarkable proficiency has been attained in the performance of capital operations cannot be gainsaid; and it would be surprising were this not the case, opportunities for the display of gynecic skill having been unlimited. Notwithstanding these brilliant operative achievements, we stand arraigned for having most deplorably failed in the management of the more ordinary and prevalent diseases of women. The truth, when thrust home, is most difficult to parry,

and the stubborn fact confronts us that we have been blinded by our ambition, which has overleaped itself and fallen on the other side. We have been consulting the signs given us by the stars of our sphere, and being absorbed with the zenith have grown unmindful of the commonplaces lying about our feet, and have been tripped thereby.

Now of all men the gynecologist should be a rationalist. No doctrine or theory should be adopted until submitted rigidly to the laws of reason and practicality. The analyzing of cause and effect should be his dominant characteristic in diagnosis and treatment; and although the doctrines emanate from teachers never so eminent, they should still be subjected to the ordeal of practical analysis as applied to physiology, etiology, and, above all, to common sense; after which candid and conservative review only should they be accepted or rejected. These may seem ordinary statements; nevertheless there is a much deeper meaning than appears on the surface, for, with all our boasted independence of thought and freedom of action, many of us are but imitators who run tandem through life. To illustrate: A few years ago, when "ulcerations" were in vogue, it was an exception to find a physician who did not carry in his pocket his loaded *porte-caustique*, ready at the first murmur of the patient (who ventured to complain of a back-ache or vaginal discharge) to sear her os uteri instanter.

A Simpson sets forth the theory of uterine stenosis, and lo! a swarm of fanatics rush about, armed with uterotomes, insisting upon slitting the uterine neck of all women who are so unfortunate as to menstruate painfully.

An Emmet no sooner discovers the true pathology of many of the so-called "ulcerated" ossæ, than behold! these same enthusiasts also discover that more than fifty per cent. of their patients who have been pregnant are also suffering from neglected, lacerated os uteri—and so the story runs.

A distinguished and acknowledged leader cannot present a theory possessing the elements of plausibility and novelty, without a multitude of imitators going daft upon the matter, and this craze is soon forgotten for another, the value whereof is always over-estimated, and its utility abused by an unskilful overdoing.

Now this impulsive credulity is not complimentary to these sanguineous men, to whom the world has accredited some share of personal ability and independent discernment. It is these hasty temperaments that bring opprobrium upon this specialty through the mischievous energy of their manipulations; whose lamentable failures build up another class of men that distinguish themselves by their scepticism, and who—though safer to the community—make themselves detestable by their supercilious contempt, silent or expressed, for all operative procedures, which would be defensible if

correlated with anatomical and physiological knowledge of the subject, but, when used as a cloak to cover ignorance, becomes intolerable. Fortunate the men who keep the happy channel between the two extremes!

It is to be regretted that the natural tendency of a specialty is to narrow the mental horizon and to engender one-ideaism. This, we are sorry to acknowledge, is very observable among gynecologists; and sadder still, is prevalent among them a love for the performance of some noted operation, ofttimes in utter disregard of those more important physiological laws, which, if rightly comprehended and faithfully practised, would not only prevent the abnormities, but do infinitely more toward the restoration of health than their most approved appliances. We would not disparage operative procedures when the case demands them, but we deprecate the damaging tendency to *overrate* their importance. Right here permit me to explain that, throughout this paper, when speaking of operative procedures, I wish to be distinctly understood as not including the important scientific operations, such as ovariotomy, the closure of lacerations, the removal of polypi, etc., but as referring to the minor and ordinary diseases, such as displacements, dysmenorrhœa, and kindred anomalies, which, to the casual observer, appear comparatively simple, but which, physicians will acknowledge, exhaust our best skill and philosophy, and demand more profound consid-

eration than is suggested by the touch or sight. Wherefore do we have a flood of gynecological literature teeming with reports of bloody operations, while comparatively little is said about the vastly more important commonplace essentials relating to hygienic principles? Because there is connected with these operative procedures a charm which captures even the more conservative men, and which arises too often from an innate love of ostentation and the knowledge of the decided impression which these operative displays make upon the public mind. And yet as physicians we realize that he who will teach us to treat successfully dislocations of the uterus, painful menstruation, and kindred affections, will confer an inestimable boon upon humanity. In capital operations we have made wonderful advancement. Why? Because they are now based upon scientific principles and natural laws. But from some cause the management of the minor abnormities has yielded very indifferent results, or as is too often the case matters have gone on from bad to worse. This general non-success experienced in the treatment of these cases is unmistakable evidence that we have not reached the root of the matter, and we would prove ourselves unworthy of our profession and the confidence bestowed upon us, if we neglected to institute a practical investigation for the cause of our failure. To this intent we will strive, throughout this discussion, to discard the too prevalent love of erudite dis-

play, and begin at the threshold in our researches, remembering—

> "A man's best things lie nearest him,
> Lie close about his feet;
> It is the distant and the dim
> That we are sick to greet."

Passing, therefore, the learned discussions of those obscure pathological conditions so ably argued in our literature, we will begin our consideration by thoroughly imbuing our minds with the realization of the beauty and sufficiency of nature's provisions. As physicians, there is nothing more becoming than keeping constantly in view the design of the Master, who, having created all things, pronounced them good. Let us then hold steadfastly this vantage-ground, and study well the delineations of its chart, noting carefully its landmarks; for without a correct and comprehensive knowledge of the topography of the female trunk, we cannot hope to succeed as gynecologists. Now this statement may seem a needless assertion of what will be readily recognized as a self-evident truth; but when we once realize that physicians as a body have a decidedly faulty idea of the relative positions which the female pelvic organs occupy to each other and to the body, then this assertion becomes more pertinent. It may seem too sweeping, and to many incredible—but that I speak within bounds is easily demonstrable, and I trust (before we finish this essay) to prove—that for years we have

been striving to accomplish impossibilities by the use of absurd appliances. The parties who are really culpable in this matter are the teachers who, through ignorance or indifference, have inculcated erroneous ideas by incorrect assertions or through the use of ridiculous diagrams. These have done more to embarrass and perplex the after lives of students than can be expressed. Better far that intelligent minds be left free to practise in accordance with the suggestions of independent reason, than to be compelled to spend years in perplexity trying to unlearn these college-received fallacies. Look, for example, at any of the numerous absurdities that disgrace our most popular text-books. In many of these diagrams it would appear that the design was to adapt the pelvic organs to the conformation of some instrument, and to display its mode of adjustment, which by the illustration is made to look quite feasible; but when we put it to the actual test, we soon learn how completely we have been misguided and discover its entire impracticability. If we found these caricatures in some ancient medical work, we would pity the ignorance of the past; but to encounter them repeatedly in our most modern standard works, is an annoyance and imposition most difficult to tolerate. We are aware how much more tenaciously an illustrated idea attaches itself to our minds; why not, then, use this potent factor in teaching correctly, or else discard these ludicrous misrepresentations entirely. If we are to have our

reference books illustrated by drawings, let them harmonize with the text. To gain a definite comprehension of the inaccuracy of these diagrams, let any one take a pair of calipers and a measuring scale and ascertain for himself the unsymmetrical measurements of the parts represented.

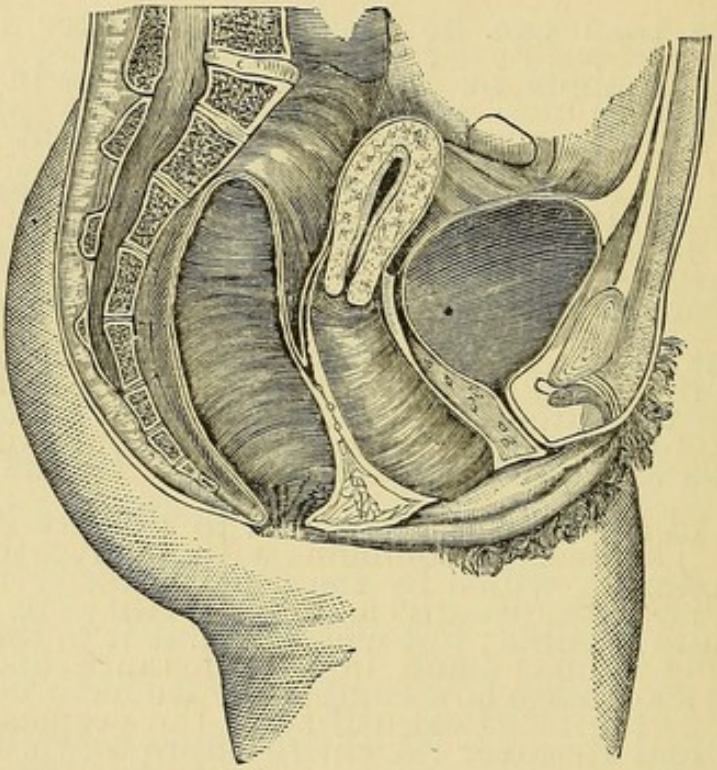

FIG. 1.—Diagram usually employed to represent the female generative organs and pelvis. It is concerning this cut that Dr. Thomas remarks: "This certainly portrays a state of things which never exists unless artificially produced, and distorts the reality to such an extent as to be productive of absolute evil, yet this is the diagram employed by Gray, Wilson, and many others, and even to-day is quite commonly copied into works dealing with this subject in a special manner."

Who ever saw a normal pelvis with the pubic bone five inches in advance of the sacral prominence, with an antero-posterior diameter of from seven to ten inches? Or who ever discovered a uterus stand-

ing in the centre of the pelvic plane, parallel with the truncal axis and supported by an enormously distended vaginal tube occupying the pelvic curve. Yet these, with numerous other absurd representations, have for years been presented to us as means of instruction. If such misconceptions are entertained by those whom we have regarded as guides and authorities, what may we not expect to find in the practice of those whose advantages for acquiring correct information have been comparatively limited? We naturally expected to find these evils entirely corrected in the latest edition of Dr. Thomas' popular work, but were greatly disappointed; and the attention which the author gives this topic serves only to intensify our disappointment.

Dr. Thomas, in common with many other brilliant teachers, is given to partiality in dealing with his subjects, and in this instance his favorite theme is the practical utility of the perineal body.

He opens this section very promisingly with a criticism on the familiar but erroneous wood-cuts contained in other text-books, of which he pertinently remarks:

"This certainly portrays a state of things which never exists unless artificially produced, and distorts the reality to such an extent as to be productive of absolute evil," etc. These and other preliminary comments of the author (which we gladly indorse) greatly strengthened our expectations. We

read further on, "Figure 43 represents my idea of the true relation of the vagina, bladder, uterus, rectum, and perinæum to each other," and proceed to study this ideal diagram. The disciplined eye will at once recognize numerous radical faults, and as an ideal model it is far from satisfactory. We have no wish to assume the rôle of critic respecting the teachings of one so highly esteemed, but in a matter which may affect the well-being of thousands, candor is justifiable. We will therefore study this diagram, with the object of more forcibly impressing accuracies by a comparative consideration of inaccuracies. We are gratified to find that the distended vagina (as usually shown) is discarded, and the uterus properly placed at right angles with the vagina. These, however, with a more correct, though somewhat exaggerated representation of the perineal

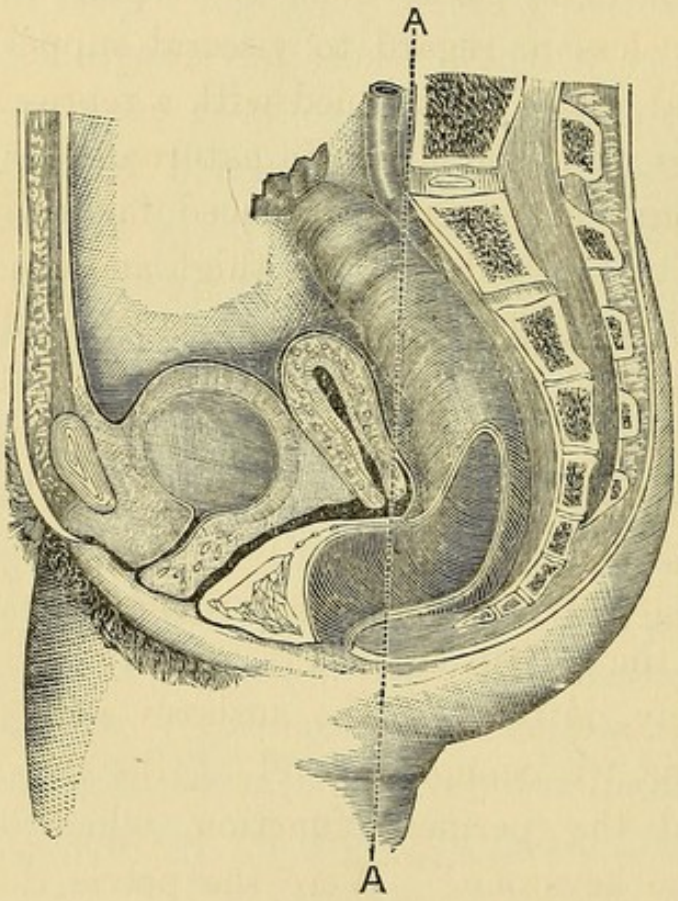

FIG. 2.—Dr. Thomas' ideal diagram of female pelvis.

body, constitute the sole observable improvements. The author's mind seems to have been so entirely absorbed by his dominant idea—the demonstration of the perineal functions—that he is apparently oblivious to all other cardinal principles. Taking it in detail, we notice that, while the dilated vagina is discarded, the absurdly exaggerated rectum is repeated. The pubic bone is so placed as to be utterly useless in regard to visceral support, while its normal place is occupied with a representation of a mass of tissue which in nature does not exist. The sacral prominence is placed far in the rear, if we are to be guided by the thigh and other parts represented. The dotted line showing the axis of the body, A A, I have taken the liberty of adding, to aid us in drawing our comparisons. In other respects, this cut is an exact reproduction of the original.

Now, if we apply the calipers to these parts, we will find the pelvic diameters greatly exaggerated. Surely, if this be the author's idea of a normal pelvis, we cannot marvel at the importance assigned the perineal function, which he designates "the keystone." Were the pelvis thus constructed, it would indeed require a remarkably developed perinæum to withstand the superimposed forces to which it would be subjected. We deeply regret that so eminent a leader, whose writings are so widely circulated (having been translated into several languages), should have so sadly missed this

opportunity of giving the world a correct diagrammatic ideal of the female pelvis and generative organs. Before dismissing this part of our discussion, we will consider another cut (Fig. 3), which we find upon page 403 of this same work. There seems to be a strange incongruity in the author's conceptions of the normal position of the uterus. On page 156 is exhibited a cut (Fig. 1), which the author previously condemns most unqualifiedly as "a state of things which never exists unless produced artificially" and "productive of absolute evil," but on page 403 we are presented with precisely the same state of things as an illustration of proper manipulation. How can we reconcile such contradictions? Referring to the last diagram, the author continues: "No pessary with which I am acquainted so universally answers the indications of supplementing the action of the utero-sacral ligaments, and sustaining the prolapsed vagina, rectum, and bladder, as Cutter's admirable pessary shown in Fig. 145. The cup, at its upper extremity, receives the cervix uteri," etc. After read-

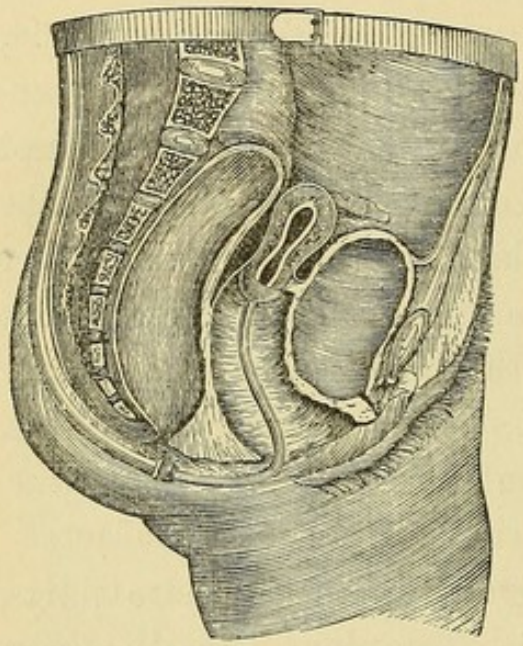

Fig. 3.—Dr. Thomas' diagram illustrating adjustment of stem and cup pessary for prolapsus.

ing these words turn to his ideal diagram and conceive, if you can, this "admirable pessary" receiving into its cup the cervix uteri, if inserted with the vagina and uterus occupying their normal positions as here represented. You will at once perceive that the adjustment of this instrument, as shown in Fig. 3, would be simply impossible without first dislocating the parts forward. Introduced with the uterus normally situated, the instrument must impinge the edge of its cup against the anterior surface of the uterine neck, while the os uteri looks from, rather than into, its cavity. Every style of stem and cup supporter (?), whenever applied for prolapsus, imperfectly accomplishes, in an irritating, bungling manner, the pushing of the os uteri backward into the hollow of the sacrum, but does not lift or sustain the parts as represented. The defects of this cut are hardly more glaring than those characterizing the majority of diagrams used to illustrate the various methods commonly employed in the manipulation of displaced uteri. Taken collectively, they present a most tempting topic for dissection; but we must content ourselves with the notice of these two, which relate directly to and substantiate our argument. We can imagine such misconceptions being entertained in the days when anatomical research was limited; then they might have been to a certain extent excusable. But to perpetrate such manifest misrepresentations, while surrounded with unlimited advantages, is wholly unjustifiable. We

therefore most earnestly protest against the perpetuation of this mimetic perversion of our reference books, infinitely preferring the plain solid text unembellished by these pictorial stumbling-blocks.

CHAPTER II.

Let us now turn our attention to sketching a normal female trunk and pelvic organs with their proper bearings. We possess very accurate measurements of the pelvic diameters, together with the dimensions of its contained organs, which will guide us in our drawing. With the aid of a pair of very finely adjusted draughtsman's calipers, and a fair knowledge of gynecological anatomy, we will experience little difficulty in obtaining a much more accurate diagram than is to be found in our text-books. This is a very profitable experiment, and one which every gynecologist should practise. The hours spent in draughting this plate, now before us, were the most instructive of my medical life, and were to me a source of interest and revelation. This diagram was drawn from the standard measurements of the female pelvis, as given in the books, and it has caused me considerable gratification to find that subsequent anatomical investigations fully sustained this diagram in every detail.

We take for our fixed point the pubic bone, and measure, at an angle of sixty-two degrees with the horizon, four and one-fourth inches, and there fix the

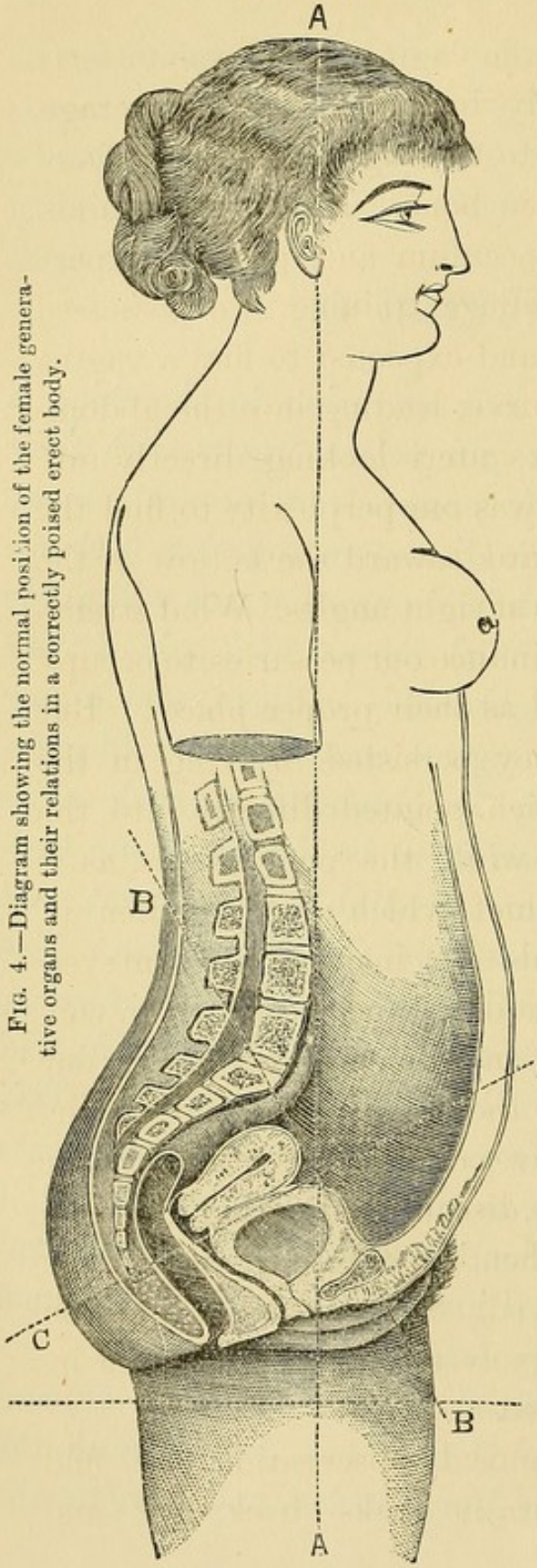

FIG. 4.—Diagram showing the normal position of the female generative organs and their relations in a correctly poised erect body.

sacral prominence. Next we measure from the centre of the pubic bone, at an angle of forty degrees, four and one-half inches, and fix the hollow of the sacrum. From the inferior border of the pubic bone, at an angle of twelve degrees, we measure four and a half inches, and place the point of the coccyx. Guided by these points, we represent the sacral, coccygeal, and pubic bones. We have now the frame-work of the pelvic walls. After outlining the trunk walls with proper curves, we proceed to place the pelvic organs. We make

the measurements of the vaginal walls—anteriorly three inches, posteriorly four inches, as an average, —and fix the entrance to the vagina three-fourths of an inch below the pubic bone. Now come reminiscences of our early speculum and pessary experiences. Fresh from college training, we possessed the stereotyped ideas, and expected to find a vagina following the pelvic curve, leading into the abdominal cavity, with the os uteri looking directly into the tube. How great was our perplexity to find the vagina dipping backward toward the hollow of the sacrum, with the uterus at right angles. What strenuous efforts we made to induce our pessaries to occupy what we then regarded as their proper place! But strive as we might, they persisted in lying in the axis of the vagina, which pointed directly into the hollow of the sacrum, while the poor uterus, as if conscious of the mischief which had befallen it, seemed striving to evade our inspection. Anteversions were rife in those days, and we blush to contemplate the curious instruments left upon our hands, with which we then strove to prop up the uterus and teach it a new position. Fortunately for our patients, we became discouraged with our useless efforts, and desisted, when, much to our chagrin, the sufferers usually improved. So we began to question if it might not be ourselves who were at fault instead of the much-abused uterus.

From careful anatomical observation, we find that the uterus naturally looks backward and

downward to the second coccygeal bone. At right angles with it the vaginal axis points into the hollow of the sacrum, in the direction of the third sacral bone. Keeping these facts in mind we proceed in our delineation, and draught the uterus and vagina with proportionate dimensions, and find we have the uterus safely ensconced beneath the overhanging arch of the sacrum. After representing the bladder and soft structures, we next define the axis of the body. This imaginary line, A A, in a properly poised body, extends from the vertex, through the trunk, touching the anterior surface of the second lumbar vertebra and the inferior border of the pubic bone downward to the point between the plantar arches. Having drawn a line, B B, at an angle of sixty-two degrees to represent the plane of the pelvis, we draw another, C C, to represent the pelvic axis. And now the beautiful mechanism of the female pelvis reveals itself. Notice how these lines intersect each other at a definite point. Observe the home of the uterus bounded by these lines and sheltered by the protecting arch of the sacrum, while, in the angle below, the bladder, admirably situated, acts as a grateful cushion. Look also at the graceful, receding curve of the dorsal wall; conceive how an impulse, glancing down this incline, must be projected downward and forward to expend its force upon the resilient concave abdominal walls, while the reflex current will move in such a direction as to really lift the pear-shaped uterine body

toward the arch. Consider the position of the os pubis, how it is the centre of gravitation for the abdominal viscera, while not an ounce of weight is allowed to rest upon the womb. For many years we have been devising "supports" for the uterus, and planning measures whereby we might relieve it of the superincumbent weight, to discover at last that nature has provided ample means for the fulfilment of these ends. The longer we intelligently study the wonderful mechanism of the human body, the more profound will become our reverential admiration for the provident wisdom of the Divine Architect. We discover that not a rounded prominence or graceful curve, not an elastic tissue or solid structure but is eloquent in its grace and perfect in its utility. Some years ago I began a paper on the mechanism of uterine displacements. The gist of my argument lay in the line of Darwinism, based upon the relation which the uterus is called upon to sustain to the erect body. After spending much time in adducing arguments to prove the seeming impossibility of the uterus maintaining its normal position exposed to the various forces with which it was supposed it must necessarily contend, I finally took the measurements of the pelvis with a pair of calipers, as we have already done, when the perfection of the pelvic construction was revealed to me and my theory was completely annihilated. God designed mankind to stand *erect*, and in this posture only are they graceful, noble, healthful, and strong mentally

and physically. He made nature arbitrary in her laws—the observance of them is health, while disease is simply the expression of disobedience. Therefore, when called upon to treat an abnormity we may not begin by dealing with the effect, but must first discover what law has been transgressed. We are now prepared to give our attention to one of these abnormities: dislocated uteri.

It would be strange if you did not already anticipate the pith of the argument on this subject. When a woman stands erect with the truncal axes properly correlated, every organ and fibre enjoy an equipoise, and are most favorably conditioned to perform their several functions. But let the body assume a *slouching* posture, and the axes be deprived of their proper bearings, at once discord prevails in all the parts. A firmly poised body is a necessity to the maintenance of that harmonious antagonism of all the muscular support and balance of the various members of the body. But where one part of the active fibre is unduly tense, with a corresponding portion lax, we need not expect to find the organs sustaining their normal position. Moreover, with a truncal deviation the resistant structures, such as the pubic bone and sacral prominence, are diverged from their full and proper functions, and no longer afford sufficient support and protection. With the shoulders advanced and the dorsal region retracted, the body loses its graceful contour by the straightening of its

curves, and the truncal tube becomes, to a certain degree, straightened. The centre of the visceral gravitation is no longer through the powerful pubic bone, but through the pelvic curve; consequently every concussion and pressure from above is received through the soft and yielding pelvic tissues, and these gradually yield under the superimposed influences until dislocations and prolapsus become established. It must be understood, when we speak of the erect position, we include the sitting as well as the standing posture. Assuming an incorrect poise while sitting is a more universal habit, and demands more attention than any other, from the fact that so much more time is spent in sitting than standing. We find very few women of this generation who assume a correct sitting posture. In the days of our queenly grandmothers, who sat erect on their firm, straight-backed chairs, there was comparatively little known of prolapsus uteri. We believe that the modern luxurious chairs and sofas, with their enervating cushions, have much to answer for, and play a decidedly mischievous part in female diseases. Compare the truncal bearings of a lady of the olden time—sitting firmly erect, shoulders and head finely balanced—with the limp, languid position assumed by the women of to-day as they fall, a shapeless mass, into one of their modern semi-reclining chairs, with sacrum resting upon the front edge of the seat, and bodies bent into a curve, thereby forcing the visceral organs—increased by their cramped posi-

tion—downward upon the generative organs, with a direct propensity to push them through the vulva, for the accomplishment of which the woman could not be placed more favorably. When we consider how much of their time many women spend in this position, is it a wonder we find misplaced uteri? This sin against the upright position of the body is one of considerable magnitude.

The recumbent position is also worthy of attention. All animals avoid the dorsal position. We would be much astonished to discover a horse, dog, or cow acquire the habit of sleeping upon the back, and yet it is nearly, if not quite, as unnatural for man as the lower animals, comparative anatomy teaching us that all mammalia are similarly organized. If we study the anatomical and physiological relations of the human body, we can but be convinced that nature designed the prone position as the natural one in sleeping. Along the spine and dorsal region are placed the great blood-vessels and other organs whose freedom from weight or pressure is necessary for their healthful action. The spinal cord, like the brain, should be uppermost. Along the anterior surface of the body nature has spread a thick cushion of fat for obvious reasons, fully understood by the trapper and soldier, who always sleep lying prone. Babes and young children naturally assume the proper position, and require training to compel them to do otherwise. The supine position favors congestion and induces

unrefreshing sleep. Who ever heard of nightmare visiting a person in the semi-prone position? Superadded to these reasons, in a gynecological point of view it is important that the uterus should rest upon the bladder, and not that the loaded bladder should rest upon the uterus, while pressure along the great blood-vessels favors congestion of the pelvic organs.

Another fruitful source of prolapsus is unnatural and forcible defecation. With women, constipation is much more prevalent than with men. This is partially due to their more sedentary habits, and also to an inbred propensity to procrastinate the act. We frequently have patients assure us that they do not evacuate their bowels oftener than once a week. I remember one lady who averaged once in fifteen days for years. When such patients are forced to defecate, it is, of course, accomplished with considerable difficulty and after long and expulsive efforts, which are usually attended with much pain and followed by dragging, uncomfortable sensations in the pelvis. All this causes them to dread the next evacuation, and consequently the interval is lengthened as much as possible. The injurious tendency of all this is obvious: the peristalsis of the intestines in a short time is destroyed, through disuse, and the vis a tergo action of the diaphragm, aided by the powerful abdominal muscles, not only expel the fæces, but have an equal pressure upon the generative organs. Indeed, these patients will frequently tell you that they "feel

themselves" protruding through the vulva. These violent expulsive efforts not only push and drag the pelvic organs out of their proper position, but they produce blood-stasis, rendering the parts congested and heavy. The formation of hemorrhoids in the rectum is simply a tangible expression of what takes place in the entire areolar tissue of the pelvis. At this point the question suggests itself, May not the extremely perplexing and annoying left inguinal neuralgias be accounted for by the intimate connection of the left ovary with the sigmoid flexure and its consequent irritation through this pernicious habit? Before leaving this subject it may be well to consider its remedy. It is safe to state that there is no disease more readily cured, or more universally maltreated, than constipation. Physicians as well as laymen, from time immemorial, have run foolishly after cathartics. They have seemed possessed with the idea that the disease lay materialized somewhere along the alimentary canal, waiting to be dislodged by some brisk purgative. So firmly established is this pernicious practice that it is combated at the risk of losing caste. The child no sooner breathes than it must swallow a portion of physic, and from that moment until the hour of death the intestinal tract must be tortured by the use of drugs. It is by this injurious practice that constipation is greatly augmented, for I challenge the world to produce a single cathartic drug, given in small or large quantities, which will not, by its secondary effect, induce

constipation. Laxatives are our sheet-anchor in diarrhœas, but in the opposite condition they only enhance the difficulty; indeed, costiveness can be created at will, by an occasional administering of a purgative.

There is another fruitful source of intestinal inertia, in the abuse of the rectal injections. We often experience the greatest difficulty in re-establishing the rectal secretions that have been destroyed by a protracted use of the syringe. This is another illustration of nature's frugality. If an artificial lubricant is supplied, nature desists, and in this case the rectum becomes as passive as an india-rubber tube: so that I have come to regard the habitual use of the rectal syringe as even more pernicious than the laxative drug. The cure of constipation is readily accomplished by the establishment of punctual attention given to the bowels at a determined moment daily, by the dismissal of every form of cathartic drug, discontinuance of the expulsive effort, a reliance upon the peristalsis, and by a regulation of the diet, all of which should be explained to the patient. A portion of rye-meal mush and treacle will, in a few days, relieve ninety out of a hundred. Add to this the appropriate remedies—nux vomica, bryonia alba, etc.—and we complete the requirements.

We will next consider a subject that influences displacements indirectly, but which, nevertheless, is second to none in the importance of the part it sus-

tains in prevention as well as in the cure of these troubles. We are familiar with the effects of exercise as illustrated in the arm of the smith, or the leg of the pedestrian, and also in the opposite phenomenon which takes place in these limbs through inaction, thus demonstrating the truth that exercise is a potent factor in the production of locomotive ability, which increases with the using. With many women who suffer from pelvic weakness, there is a noticeable atonic condition of the muscular system, with a corresponding aversion to physical exertion. The limbs, although they may be plump, are deficient in striated tissue, with a predominance of adipose tissue. These patients are usually pale or waxy complexioned, and the surface is subject to ecchymosis, thereby evincing an imperfect arterial and capillary action. These women are easily wearied, in fact are habitually tired, from the fact that they have no sustaining tissues. Now we know that that which holds true of one portion of the animal economy holds equally true throughout the entire system. Nature, though amply provided, is nevertheless prudent; bestowing most generously her gifts upon those who wisely employ them, but withdrawing them from those who abuse or reject them. Therefore, in those women who spend much time in inactivity, we find throughout the muscular system a condition similar to that produced in the limbs by accident or illness. Not only are her limbs weakened, but the entire body suffers

degeneration of its tissues, while the disposition to passive congestions, through weak and dilated capillary walls, is quite pronounced. We are aware that the body is composed almost entirely of capillaries, and upon capillary tonicity depends the health of the body; for instance, inflammation is simply an increased determination of arterial blood to a part whose capillaries have lost their contractile power and become dilated, while passive congestion is simply an expression of relaxed vital resistance of the capillary walls. Now the lack of exercise produces this degenerate, dilated condition of the capillaries, thereby producing general blood-stasis, which is a form of death. By exercise we secure the constringing of these minute blood-carriers through the stimulus of alternate contraction and relaxation of the muscles. Some pathologists maintain that there is but one essential proximate cause of disease, viz., the loss of vital resistance and the enlargement of the capillary vessels. The indication then would be, that the cure of disease must necessarily be preceded by the constringing of the capillaries and a restoration of their contractile power. To enter into a detailed consideration of the physiological importance of exercise would necessitate a *résumé* of the laws of nutrition, so intimately are the two allied. We are familiar with the effect of bodily exertion upon the respiratory organs—with the increase of respiration there must be a proportionate increase of oxygen supply, and

consequently a more complete purification of the blood through the combustion of its effete products. We also secure, through exercise and consequent enforced respiration, the prevention of adipose deposit, which is an important source of disease. Fat is merely the product of débris, which by its pressure produces atrophy and destroys the contractile fibre by its substituting propensities. We might continue to speak at length of the importance of this potent factor (exercise) as applied to the generative organs of women, but the physiological inferences are too evident to demand further discussion. I may be pardoned for so fully referring to these well-known principles, but it is a recognized fact that we fail not so often through ignorance as through neglect to make timely use of the knowledge we possess.

There is no valid reason why the sexes of the human species should not sustain the same relative standard of physical vigor observable among lower animals, and also no reason why the female of the human species should not enjoy, in common with the lower animals, immunity from accident during parturition. I firmly believe that many of the accidents peculiar to child-birth are due to a *fatty degeneration* of the parts involved, being the result of inactivity. In Germany, France, Austria, and other countries, where the peasant women share the field labors about equally with the men, the women often outstrip the men in the amount of work accomplished, and I have it upon reliable authority that the diseases

peculiar to women are, in this class, comparatively little known to what they are with their more delicately nurtured sisters. In our own experiences we are often called upon to witness the restorative powers of an active life; as, for instance, when some chronic invalid, through reverses of fortune, is compelled to support herself by her own exertions, thereby receiving a richer blessing through this enforced activity and by having an *object in life*. Exercise, to be advantageous, must be judiciously employed, for the invalid may become seriously injured from an over-exertion, through a faulty conception of its principles. It should be practised cautiously and rationally—begun moderately and gradually increased with the acquirement of ability. No over-fatigue should be permitted, and the patient should always be made to lie down in the semi-prone position, and indulge in a complete rest after each effort. The lesson taught us by the ingenious lifting-machine (unfortunately now going out of use) furnishes us with some valuable suggestions. The prescribed regulations in the use of this instrument are all that could be desired. The poise of the body while lifting (perfectly erect), and the rest enjoined after each lifting exercise, are rules based philosophically, and aptly illustrate the regulations which we insist upon in other forms of exercise. A prolonged tension of the muscles, or an exertion with the body incorrectly balanced, will oftener be injurious than helpful; while the alter-

nate contraction and full relaxation of the muscles in their normal equipoise cannot fail to work happily in securing a healthy, elastic tone to the entire body.

The hackneyed subject of dress reform needs only a passing notice here, as it has already been so freely and frequently discussed. Physicians must marshal a stronger force than mere reason to combat successfully woman's pride and the she-dragon—Fashion. There is one result of tight lacing I have never known to be commented upon, but have frequently observed, and this is the atrophy of the muscles over which the pressure exists. It is not an unusual thing to find merely a vestige of muscle left where it is normally strong and prominent. In fact, tight lacing of the trunk produces precisely the same local results as we observe from the bandaging of a limb. Is it strange, therefore, that we so frequently discover distorted spines, with their accompanying symptoms?

It would be a work of supererogation for this paper to deal with those morbid conditions so fully and ably treated of in our text-books—subinvolution and kindred causes of weakness, and I would not be understood as ignoring the important part they play; but it is my aim in this article to deal mainly with those practical and commonplace matters which are, as a general rule, lost sight of in the pursuit of more novel and scientific researches.

CHAPTER III.

Having briefly considered the principal influences which permit the occurrence of abnormal conditions, we will proceed to speak of some local and general means for the restoration of the normal condition. We all have before our minds typical cases of dislocations, where the parts have for years been gradually losing their tonicity and acquiring a chronic abnormal condition. Such a patient, with a long-standing prolapsus and an irritable condition of the pelvic organs caused by a bruised flexed uterus, requires something more than general treatment. The parts dislocated have no power within themselves to regain their normal position. To begin our treatment, therefore, by prescribing simply exercise would only add to the suffering already existing. It is hardly necessary to state that our first duty is to try and relieve all general irritation and local hyperæsthesia, by complete rest and other appropriate means. After this we will strive to restore the parts and return them to their proper location by some rational manipulation. In order to do this intelligently, we must familiarize ourselves with the rationale of disloca-

tions. We must first ascertain what are the natural supports of the womb that are at fault.

We have been accustomed to hearing the uterine ligaments referred to as being in some direct way the supporters of the uterine body. Let us see if this can be the case. First, we have the large broad ligaments coming from the iliac regions and attached along the whole length of either side of the uterine body, but these are so directed as to be able only to maintain the parallelism of this viscus. The round ligaments occupy such a position and insertion, together with their circuitous route, as to make it evident that their function is simply antagonism against the influence of a distended bladder. Opposed to these are the sacro-uterine ligaments, which also act as conservators of the uterine balance. None of the ligaments, therefore, can possibly be made to act as supporters. Spread over the fundus and bladder, and enfolding these so-termed ligaments, is the peritoneum. Thus, taken collectively, they combine to act as a reciprocal balance to the uterus, as the guy ropes and canvas sustain the centre staff of a tent. The broad ligaments preserve the lateral balance. The bladder sustains it in front, over which it is poised by its natural inclination, peritoneum, and round ligaments; while its natural retractors are the ligamenta sacro-uterina, aided by the utero-rectal connective tissues and the vaginal walls which encircle its neck. The vaginal walls are kept in position by the loose areolar tissues

which surround it and connect it with the neighboring parts, but they in nowise act as a columnar pedestal upon which the womb may rest, but simply as an auxiliary to keep the uterus balanced over the bladder. Surrounding the uterus and its ligaments everywhere are the sub-peritoneal cellular tissues, connecting them all loosely to each other and serving to complete the mutual relation of the parts. The main stay of all these is found in the resilient perineal body, without which the equipoise cannot be secured. With a well-developed perineal body, the bladder is upheld properly over the os pubis, the vaginal tissues are kept intact; and these two ends secured, the uterine position is maintained over all. Now the order of prolapsus is usually the following: First, a weakened, relaxed, and degenerated perineum, through lack of exercise, straining at stool, or child-birth accidents. Secondly, a falling of the vaginal walls, which in turn drag forward the uterine neck and bladder, thus accomplishing the falling of the womb; for the uterus, once advanced within the influence of the pelvic curve, is steadily pushed downward toward the outlet. The simple reduction of the uterus seems to avail but little, for the patient no sooner regains the upright position than the relaxed parts return to their abnormal state. And now the vexed question is presented, How can we best adjust some appliance whereby the womb can be retained in its proper place until the parts have had time to regain their normal

tonicity. No subject brought before the medical world has received more attention than that of uterine support. The ingenuity of medical men has been exhausted in the search for some effective invention. So earnest and active has been the labor in this matter that, judging from the numerous strange productions, we feel persuaded that not a few have gone daft on the subject, for surely none but men of distorted imaginations could invent and recommend such twisted absurdities as we find in the catalogue of pessaries. Place before an intelligent layman the heaps of abominations which have been invented, advocated, and adopted for suffering women, and after examining one by one the unseemly, contradictory contrivances, of every conceivable shape and material, imagine his confusion as to what manner of organ the vagina might be. The probable design of many of these inventions would perplex even an anatomist. Now then, there is no reason why the vagina (simply because it is elastic and will accommodate itself to any shape or size, from a pledget of cotton to a child's head) should be converted into a curiosity shop. These vile contrivances are a disgrace and dark stain upon the history of gynecology, and we hope the most of them will soon receive their merited condemnation, and will only be found in their proper place—in the chamber of horrors. If we are obliged to use some mechanical support, let us also use common sense united with anatomical knowledge. The mechanism

of the instrument should harmonize with nature's requirements at least. More than two thousand years ago the ancients used, for uterine supports, inflated bladders and bits of the intestines of smaller animals, and we question if there has been such a wonderful improvement over these olden ideas. Surely, had the ancients been guilty of the use of certain of our modern pessaries, we would have commiserated the barbarity of that age. Now what are the desiderata of a pessary? Simply these: that it restore and retain the parts in as near a normal position as practicable, and in as gentle and non-irritating a manner as possible both to body and mind. It should never be so constructed as to impinge upon sensitive, important portions of the body, designed to be free. Therefore, no instrument should be adopted which exercises pressure against or environs the uterine neck (the usual seat of obstinate inflammations and erosions), or that interferes with the natural uterine vibrations.

Upon a thorough appreciation of these principles our success greatly depends. Every foreign body acts more or less as an irritant, and therefore should be no larger than is absolutely required, and should be so constructed, whenever feasible, as to be under the control of the patient, who should be instructed regarding its removal and replacing, as she should wear it only when actually needed. It is absolutely necessary that it be so constructed as to allow the vaginal walls to sustain their natural relations;

therefore we will make it flat, wider above than below, but never so wide as to stretch the walls of the vagina, bearing in mind the fact that in a prolapsed state the vagina is wider than after reduction. Its length should be sufficient to carry the uterine portion of the vagina so far back as to cause the os to look toward the sacro-coccygeal joint, but it should not be so long as to produce any undue traction on this portion of the vagina, for by so doing we will defeat our object by producing laxity of posterior vaginal wall and may induce areolar hyperplasia at its point of pressure. Add to the foregoing considerations a correct understanding of the vaginal axis, and we possess all the important features of a pessary. Viewed in the light of these principles, what a harrowing study the vast array of these inventions becomes,

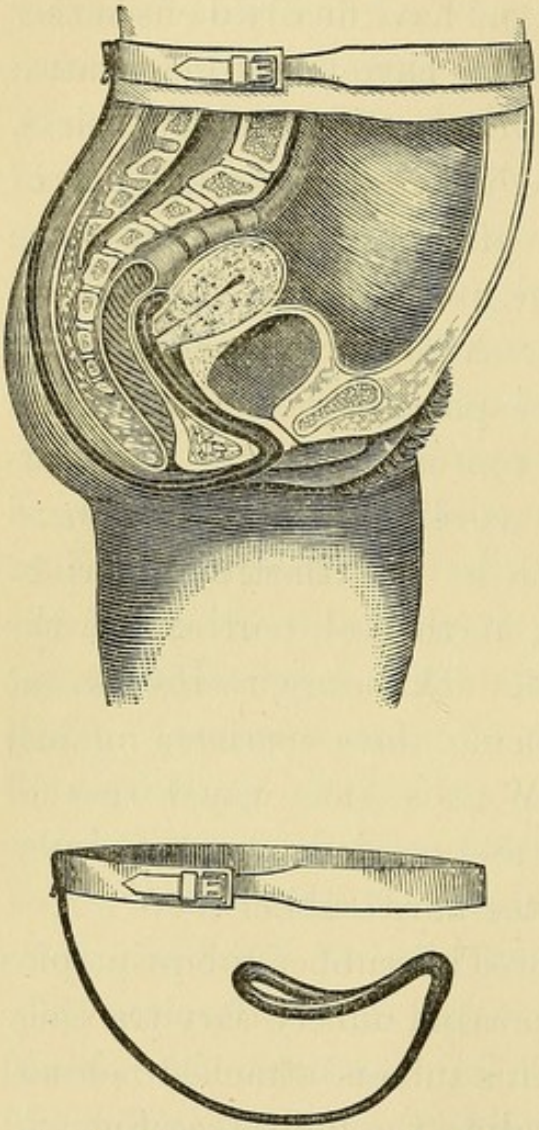

FIG. 5.—Diagram illustrating Dr. Donaldson's retroversive and prolapsus pessary, with the same adjusted.

many of them being a stain upon the good name which alone ever secured for them a recognition. During my experience I have had occasion to study many of these appliances, and have finally devised the one here represented, which I have found most satisfactory. It is modelled after the Cutter loop pessary, which has afforded me the best results of all the hard-rubber pessaries in the treatment of simple retroversions and prolapsus of the uterus. This instrument is constructed as follows: A copper wire loop bent so as to conform to the vaginal curves, and its approximated ends bent to conform with the perineal angle; this wire loop is covered with soft rubber, which is continuous with a tube, thereby securing smoothness and softness at the point of exit from the body, a seat of great annoyance with the use of the hard material, this being the experience of all who have used them. We also do away with the unevenness which cannot be avoided where the rubber tube is attached to the hard rubber loop. Another important feature. The rubber tube we construct quite light, so as to avoid unnecessary traction upon the instrument. This tube is attached behind to an elastic belt surrounding the body (see Fig. 5). The vaginal portion, being of yielding material, is more gratêful to the sensitive vaginal tissues. One of the chief ends to be sought for in a pessary (the unconsciousness of the foreign body) is thereby secured. The instrument which constantly directs the mind of the patient to her complaint

will certainly fail, in proportion to its irritating qualities. This pessary, besides being made in three sizes—three, three and a half, and four inches,—is susceptible of modification through adaptability of the copper wire. Another recommendation is that it can be easily managed by the patient. The instrument should always be removed at night, or while the patient is in the recumbent posture, and can be removed and inserted as the symptoms of the patient will readily suggest, and in this way the weakened tissues may be gradually coaxed and trained back to their former tone, while the use of the support is gradually discontinued. Every physician is well aware of the uselessness of expecting any restorative benefits from an internal pessary worn constantly. In fact, we know that the atrophy of the vaginal walls is only increased by this pressure, just as a splint worn for a long time on a limb produces atrophy.

After months and years of continuous wearing of perfect-fitting pessaries we have removed them only to learn that the tendency to prolapsus is augmented, while frequently the persistent irritation caused by the foreign body develops a chronic hyperplasia of the uterus, with disintegration of the cellular tissues; and thus matters go on from bad to worse with the patient. Again, it is not an unusual occurrence to find that the hard substance produces very troublesome ulcerations, and frequently the patient is forgotten or lost sight of while wearing a pessary,

when the instrument may burrow itself into the parts, and fistulæ and other distressing accidents occur. From all these objections this pessary is free, and it is the only pessary with which I am acquainted that combines simplicity, practicability, comfort, and a promise of final restoration of the parts affected. While it is free from the objectionable features of other vaginal pessaries, it achieves everything that can be accomplished by any vaginal pessary in every form of prolapsus. The manner of inserting this instrument is of some importance. There will be found a wide diversity in the tact displayed by different patients in this manipulation, which is really very simple when properly comprehended. The patient may assume the semi-prone or standing position; then, with the instrument lubricated with castile soap (never grease, as it kills the rubber), insert it with its fenestra looking toward each labium. When it has entered the vagina, the perineal extremity of the pessary is pulled well forward toward the pubis, and the distal extremity of the loop made to traverse the posterior wall of the vagina, and in this manner made to pass behind the cervix uteri before the tube is drawn backward, or the pessary placed squarely upon the vaginal floor. These directions should be strictly carried out, otherwise the distal extremity of the loop will be found in front instead of behind the cervix. We need scarcely waste a consideration on the anteversion pessary, except to condemn. I have never yet wit-

nessed any benefit from its use, and have seen considerable needless suffering caused by its presence. It is wholly impracticable and ridiculous in its design, and merits only unlimited disapprobation; and this opinion is the one usually entertained by all who have given it a fair trial. Recent anteflexion must be treated as simply a form of prolapsus. I think it safe to say acquired anteflexion, uncomplicated with inflammatory processes, never occurs without first a weakening of the vaginal walls and subsequent advancement of the neck of the uterus; for in anteflexion of the uterus we find the uteri in the same position as in retroversions. We must also remember that the term anteversion is a deceptive one, as the uterus in the normal position is decidedly anteverted; so we can readily understand how physicians who have acquired a faulty idea of the physiological position of the uterus from incorrect teachings, might recognize in the normal position a deformity, and resort to incorrect treatment. Instances of these injurious proceedings are by no means rare. I will briefly cite one case, which will fairly illustrate our meaning. Miss L——, a young lady, twenty-three years of age, consulted me for painful menstruation. She had been under the treatment of a gynecologist of considerable distinction, who had pronounced her case one of anteversion and had advised an anteversion pessary, which she had worn for two years, and which had given her no relief, but had

added greatly to her sufferings. After wearing the pessary for several months, she experienced (what she described as) "a gone feeling" when it was removed, and this encouraged her to persist in carrying it. The perineal body was found considerably atrophied from the pressure of the large pessary, and the vagina much dilated. The uterus was in its normal position. I removed the pessary, advised open-air exercise, walking, and horseback-riding. For a time she seemed to miss the "support" which she had experienced from the pessary, but soon this feeling disappeared. No displacement of the uterus followed, and the menses were soon performed painlessly. When quite restored, she again visited her former medical attendant, who once more declared she had an anteverted uterus, and advised the replacement of the pessary, which of course she declined. Now I believe this physician was thoroughly honest in his convictions, and I know this case to be only one of the many who are enduring like needless torturings at the hands of well-meaning but mistaken physicians.

When we take into consideration the diameters of the female pelvis and the relations of its contained organs, we must feel that we are fully justified in pronouncing the pathological term "anteversions" a misnomer. The etiology of anteflexions of the uterus (uncomplicated with phlegmonous process) is first a curving forward of the uterine neck, produced by a prolapsing of the vaginal walls, causing

the uterus to assume the form of a retort, which deformity is increased with the continuance of the predisposing causes. The statement, therefore, sometimes seen in our literature, that "the cervix usually moves somewhat in the opposite direction from that taken by the fundus," is incorrect, for the os in anteflexions, when complicated with vaginal falling, is found looking toward the introitus. This being the principle of simple anteflexions, reason would suggest that the appropriate method of replacement would be to treat the cases in the same manner as retrodeviations, viz., to return the os to its normal location, leaving the fundus to right itself, and experience fully sustains us in these conclusions.

Thus far we have been studying uterine deviations unassociated with any tissue metamorphosis. We will now give a brief consideration to those morbid uterine positions complicated with structural change. Flexions of the uterus are usually preceded by and found complicated with prolapsed vaginal walls; but this complication does not always exist, for we frequently find the most obstinate flexions in the virgin and also in married women whose vaginal walls are intact.

We will enumerate briefly some of the influences that produce flexions. First on the list come those distortions which are the sequelæ of versions following degeneration of vaginal structures. The os uteri deprived of its normal bearings, the uterine body first totters under its own and superimposed

weight, and then proceeds to bend upon itself. Second, those cases which are the product of inflammatory processes; some portion of the uterus or its appendages has been the centre of hyperæmia, which has caused an exudation of lymph. This circumscribed interstitial deposit, becoming organized, welds the tissue-fibres together, producing fixedness and subsequent contraction of the involved textures. In this way the freedom of circulation and normal movements of the uterus are interfered with, while the fundus, through this local shortening, is induced to gradually bend over the point of disturbance. Third, there is a condition of atony, in which the uterine walls are flaccid and thin, possessing no power of resistance, but bend from sheer flabbiness. Another rare cause is found in neoplasmata, but this does not properly come within the scope of our consideration. Any of these causes may exist alone as the occasion of the distortion, or they may coexist. From whatever source these flexions arise, it is their disposition to steadily progress with a corresponding increase of constitutional disturbance. For the sake of elucidation, we will revert to the familiar processes of textural change witnessed in a limb which for some reason has been kept in a fixed, bent position for a prolonged period. The flexor tissues become shortened and atrophied at the seat of flexure, and the extensors become elongated and lose their power to straighten the limb. This, with interstitial deposit, furnishes a condition which is not

always easily overcome with all the advantages of direct appliances.

Now this is exactly what occurs in the uterine body when it is permitted to occupy for a long time a distorted position. The concave surface becomes shortened and wasted, while the convex wall is elongated. More than this, the flexure when acutely formed obstructs the circulation not only at the angle of flexure, but by the twisting of the broad ligaments upon themselves, so that the nutrition of the parts is impaired and hyperplasia (the product of blood-stasis) complicates the morbid process. The longer this condition remains unrelieved, the more firmly established become the tissue degeneration, interstitial deposit, and deformity. The question now to be decided is, how can the cause be removed? We recognize that the first desideratum is the straightening of the uterus. If straightened by means of the sound, we find that it immediately resumes its distortion, upon the withdrawal of the sound. Any attempt to replace it per vaginam only causes it to oscillate as if pivoted at the point of flexure. This is a very annoying and perplexing dilemma. Here is an organ insignificant in size, weighing only one and one-half to two ounces, yet the cause of profound constitutional disturbance, through its cramped position, which deformity seems to defy all mechanical ingenuity. Besides, these uteri are, as a rule, very irritable at the point of flexure and in the pendant fundus. These being the

seat of mischief, we would, therefore, naturally infer that it would be unwise to use any measure which would aggravate the trouble at these points. Our chief hope of cure lies in the establishment of a free capillary circulation. Let us see how this principle is regarded in the stereotyped mode of flexion treatment. Take, for example, the very common form of flexion—the bending of the uterus backward upon itself, through a diseased contracted portion of its posterior wall resulting from hyperæmia.

Examine such a uterus per vaginam, and the angle of flexure is sensitive, also the accessible fundus lying in the cul-de-sac. Introduce a probe into the uterine canal, and the patient will tell you the exact location of the bend in the posterior wall, by the pain produced as soon as the sound reaches the diseased point. Exploration therefore demonstrates beyond a doubt, that the posterior wall, with the flexure angle for its centre, is the diseased part of the uterus. Confronted with all this, we are nevertheless directed, by all the authorities in this department, to replace these uteri—keep them replaced by the aid of a vaginal retroflexion pessary, and to enforce these doctrines we are presented with a diagram representing the uterus perfectly replaced by the presence of one of these vaginal appliances. Now all this looks very well in a picture, and reads quite plausibly; but the truth of the matter is quite another state of affairs, as any one who has not already taken pains to demonstrate may prove for

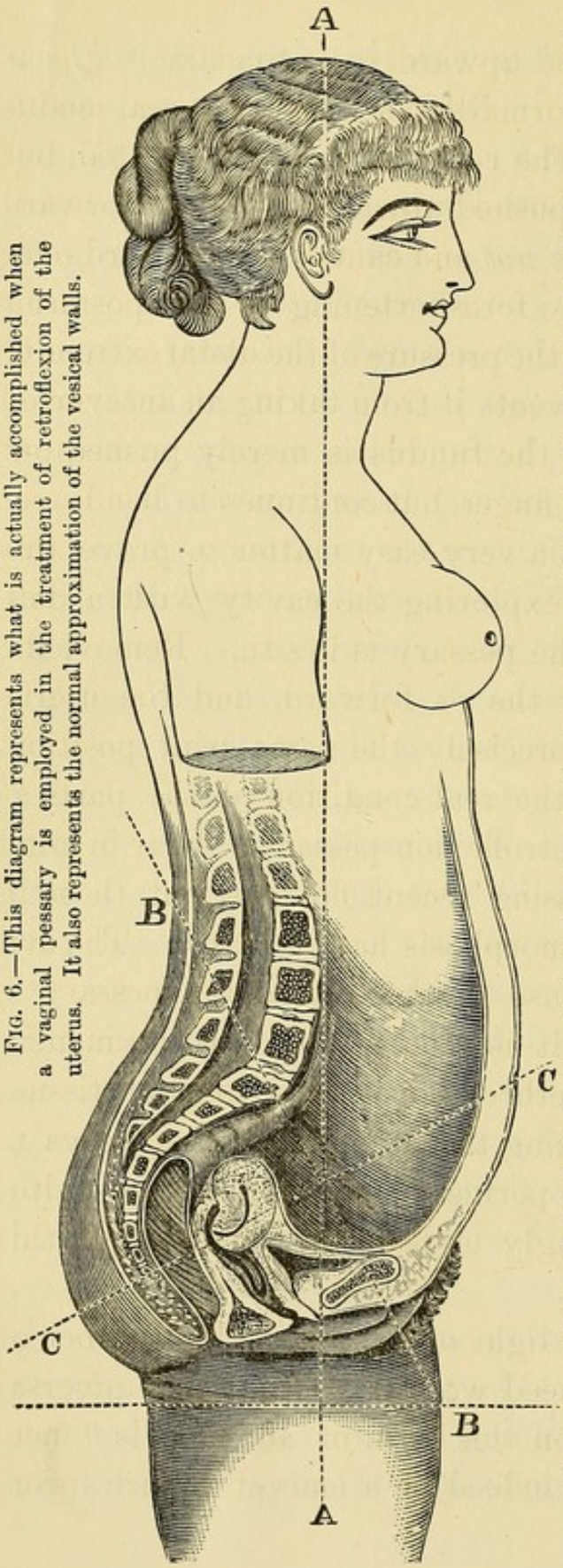

FIG. 6.—This diagram represents what is actually accomplished when a vaginal pessary is employed in the treatment of retroflexion of the uterus. It also represents the normal approximation of the vesical walls.

himself. In the first place, the hard foreign body in the vagina makes its objective pressure directly against the diseased tissues, and by its bruisings will invariably irritate the existing cause of the abnormity which we are seeking to relieve, so that the congestion which, at the insertion of the pessary, may have been somewhat restricted may be developed sufficiently to involve the adjacent tissues. In the second place, this form of appliance seldom straightens the distortion, as I have proved over and over. It will push

the os backward and upward, so as to make it appear that the uterus is normally placed, but the real modus operandi is this: The cervix is properly located, but the fundus is only pushed upward and tilted forward somewhat, but does *not* and cannot fall forward over the bladder, for the foreshortening of the posterior wall, intensified by the pressure of the distal extremity of the pessary, prevents it from taking an anteverted position. So then the fundus is merely pushed out of the reach of the finger, but continues to bend over the pessary. It is a very easy matter to prove this to be the case, by exploring the cavity with a delicate probe when the pessary is in situ. Remove the pessary and draw the os forward, and the uterus presents itself in precisely the same bent position. Fig. 6 represents the real condition of the parts as acted upon by a retroflexion pessary. Bear in mind we are not discussing recent flexions, but those in which tissue metamorphosis has occurred. The evil arising from the use of the anteflexion pessary is still greater, for it not only produces permanent atony of the urethro-vesico-vagino-uterine tissues without straightening the uterus, but it destroys to a great degree the perineal body and induces altogether an exceedingly undesirable condition of this part of the vagina.

Looking, by the light of reason, at this manner of treating flexions, need we wonder that the universal verdict passed upon this form of anomaly is "incurable." It would indeed be a marvel if such incor-

rect measures yielded satisfactory results. An authentic cure of uterine flexions by these vaginal manipulations has yet to be reported. I do not believe that my experience differs greatly from that of others, and I can unqualifiedly assert that I have never witnessed any ultimate benefit arise from these measures, and have often regretted that I ever inserted one of these mischief-working pretensions.

When this vaginal support has been worn for a considerable length of time and is then withdrawn, the patient always complains of suffering greatly from a feeling of dragging—and why? Simply from the fact that the natural supports are further impaired, while new lymph-deposit and adhesions have been excited by the presence of the pessary, and when this is removed, traction is exerted upon these recent adhesions, causing pain. I have repeatedly witnessed marked instances of organized plastic exudation throughout the areolar tissue surrounding the vagina, from the presence of a pessary, and one which did not produce undue stretching of the parts. Again, I have been informed that pessaries had been worn for over twenty years and, in one case, twenty-three years, with constantly increasing discomfort, yet with the firm belief that it was a necessity. In all these cases of the prolonged wearing of this instrument, the adhesions had become very extensive, and the mobility of the uterus permanently destroyed; also with this there was invariably associated a debilitating chronic catarrh of the parts,

induced by the prolonged presence of the foreign body. Nor were these patients in the hands of inexperienced novices, but were often cared for by physicians of repute, some of them occupying the position of teachers in this department. That such persistence in irrational, unfortunate methods of treatment exists, in this advanced age, seems incredible; but that it does exist, and is taught in our schools and by our latest text-books, cannot be denied.

How, then, can we deal with these chronic flexions? Here we have an elastic, bent organ, presenting no possible opportunity of being straightened by any external treatment. There is but one rational plan to pursue, that is, the introduction of a splint within the cavity of the bent uterus, whereby it can be placed in its normal position and retained there a sufficient length of time, until Nature has, by absorption and new deposit, established the parts in proper condition. There are absolutely but two alternatives: Either to devise and adopt some such mechanical measure, or to abandon the patient to her misfortune, fated to a life of progressive wretchedness. For a long time the necessity of an intra-uterine splint has been felt by the profession, and its merits and demerits freely discussed. Why the stem pessary has so long occupied this debatable position is readily explained. Its indispensability has everywhere furnished its advocates, while the crude and evil-looking instru-

ments presented naturally stimulated an opposition. Surely, the inventors of many of these instruments must have had a very imperfect appreciation of the nature of the highly organized structures under consideration. Fortunately for all concerned, while the uterus is delicately organized and is entitled to the gentlest manipulation, it is also astonishingly tolerant of rough usage. Those conversant with uterine pathology must have been impressed with the oft-witnessed freakishness of the uterus. A womb which will resent the introduction of a sound or even a delicate probe, developing alarming symptoms therefrom, will undergo the ordeal of *gradual* dilation and gentle deviation to a remarkable extent without evincing any annoyance. Indeed, the uterus is in complete harmony with its whimsical owner. Either is disposed to resent sudden encroachment and rude shocks, and rebel if undue force is applied; while by gentle measures and gradual approaching tactics, the crotchets of either may be avoided. This principle cannot be over-estimated; and it demands earnest application in the treatment of these cases, if we would avoid discomfiture.

Ten years have elapsed since I filed my first intra-uterine pessary from the handle of a tooth-brush. During this period I have constantly experimented with some form of this instrument, and have studied nearly all the patterns in vogue. The many disadvantages I have found associated with these appliances I need not enumerate; and yet by their aid I

have been enabled to accomplish some quite satisfactory results, and by extreme caution have avoided any serious misfortune, although the annoyance and anxiety inseparable from their use can only be appreciated by those who have had similar experiences.

The *résumé* of my experience might be expressed as follows: Those stem pessaries that are rigid and have an external support connected to a band encircling the body are reprehensible, as they necessarily prevent the natural play of the uterus, drag it forward, and subject it to injuries from shocks from within and without. Those appliances which have a solid base, or are firmly connected with the vaginal portion, are dangerous, as they preclude the normal movements and vibrations of the uterus and bruise the sensitive os tincæ, while they are wholly impracticable in the treatment of virgins.

The simple stem with vaginal bulb is unmanageable, as, unsupported, it will drop out into the vagina, or, when made to press against the os by the use of tampons, is liable to work into the cavity of the womb, as the os is very prone to dilate and swallow the bulb, thereby endangering the fundus, and frequently causing us no little embarrassment in the removal. Besides, the daily tamponing of the vagina, which this style of instrument necessitates, is an irritating, disgusting phase, of which the patient and physician become equally weary. The annoying and dangerous complications attending the use

of these (seemingly) indispensable instruments has for a long time kept my mind engaged devising some appliance whereby these objectionable features might be done away with. The results of these researches are embodied in the form of pessary which I now present for consideration. Our first requisitions in the selection of an intra-uterine splint are non-irritation and safety. With this object in view I have selected for the intra-uterine splint a silver-plated steel-wire spiral spring, sheathed in elastic material. This coil is about two inches in length, with a diameter of one-twelfth of an inch, and is screwed into a hard rubber button five-eighths of an inch in diameter. In this manner we secure an elastic, light, highly polished, and non-irritating stem, which can be bent to any desirable curve, but when unrestrained is persistently and gently self-erecting. For its retention in utero, and also for its proper guidance in balancing the uterus, I have invented an adjustable vaginal shield in the following manner: A frame of vulcanite varying in length from two to three inches, and appropriately curved. Its approximate extremity (Fig. 7, A) is open and neatly moulded, so as to avoid pressure against the urethral ridge and allow the approximation of the vaginal walls. Its distal extremity is slightly bevelled, for the reception of the soft rubber band (Fig. 7, B), which passes around the end bar, and a German-silver wire that reaches from either side-bar one and one-fourth inch distant. Upon the upper sur-

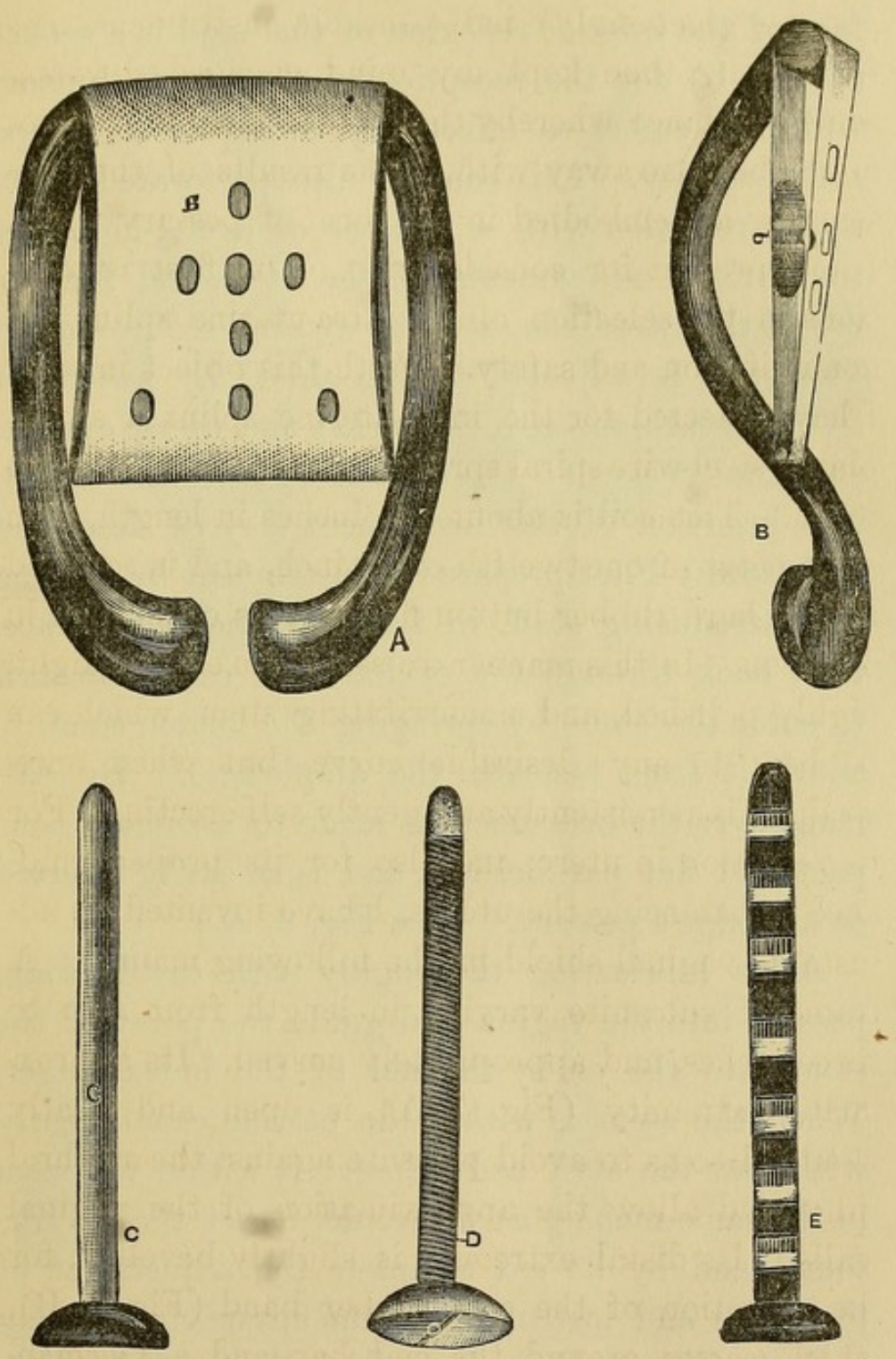

FIG. 7.—Diagram showing Dr. Donaldson's adjustable pessary for cure of flexions. A, shield; B, section of shield showing band and socket; C, plain flexible stem; D, galvanic stem—copper and zinc wire; E, galvanic stem—copper and zinc bands insulated with vulcanite bands.

face of the inferior reflexion of the band is a socket (Fig. 7, b) for the reception of the stem's button, which it embraces effectively, owing to its shape and elasticity. This band is also perforated in its upper reflexion with a number of eyelet-holes for the various adjustments of the stem, and for the use of the introducing staff, as we shall see presently. The stem is adjusted to the shield by passing it from beneath, through the socket and upper eyelets, and finally causing the button to enter the socket. The insertion of this instrument may be described as follows: First prepare the instrument by passing the introducing staff in front of the wire brace, then back through the eyelets, and cause the staff to enter the stem, by springing the button so as to admit it from beneath the diaphragm. By this manœuvre the instrument is made to assume a compact and flat parallellism, and is as easily inserted as a Hodge's pessary. (See Fig. 8, A.)

After lubricating thoroughly with castile soap, pass it into the vagina and guide the point of the stem into the os by the aid of the index finger. When the stem is within the uterine canal, gently withdraw the staff and reinsert it within the stem in the same manner as we would insert the uterine sound, and by its aid complete the adjustment of the parts and instrument as the circumstances may indicate (Fig. 8, B); after which the staff is withdrawn, leaving all in situ. The attractive features of this instrument are apparent. It is light, com-

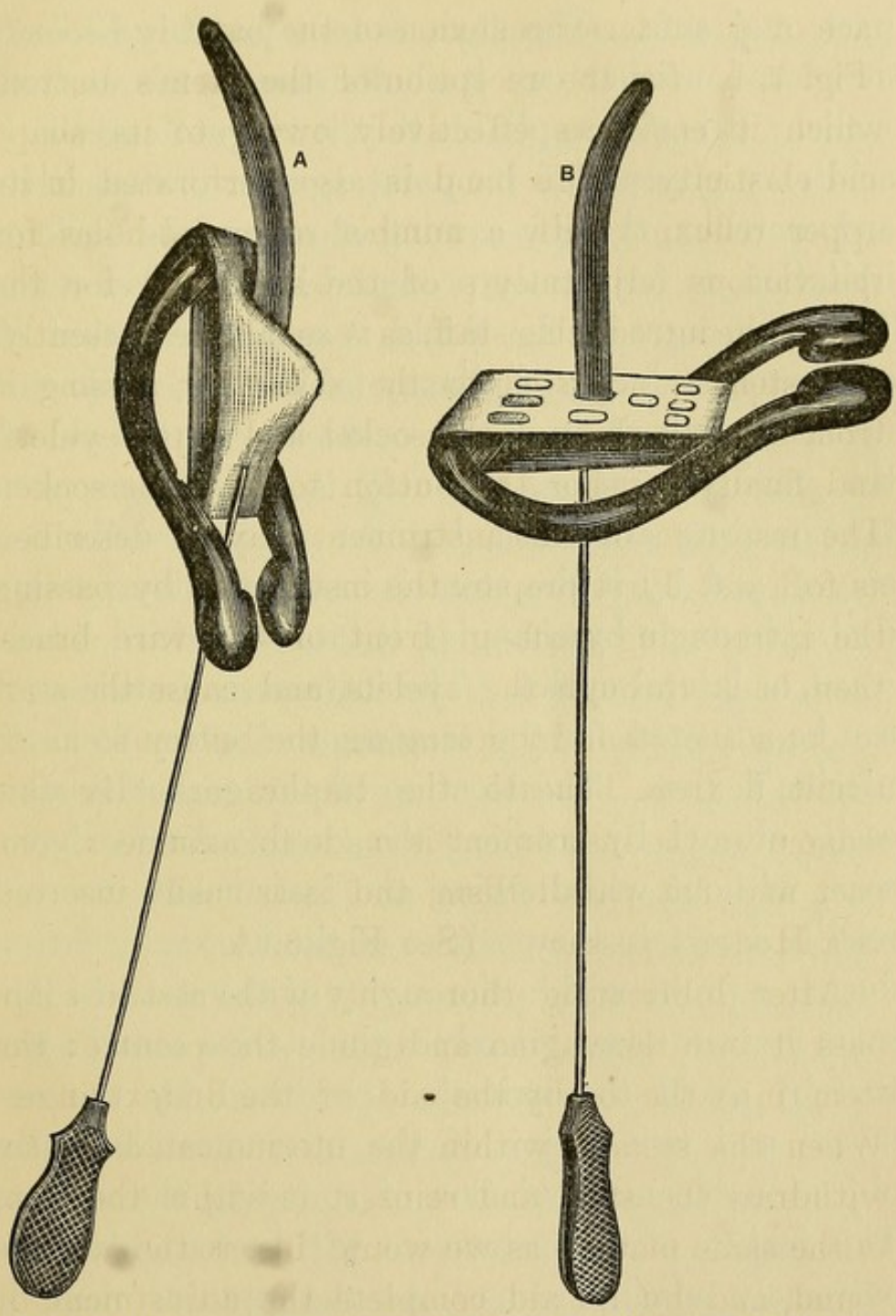

FIG. 8.—Diagram illustrating the manipulation of Donaldson's flexion pessary. A, pessary in position for insertion; B, shows the staff reinserted within the stem after the pessary is in situ.

pact, and safe. The stem cannot possibly become misplaced, neither can its bulb abrade the vaginal walls. It is also so pliable that it will not cause any arbitrary pressure of its point against the sensitive endometrium, thereby causing abrasion and serious irritation, so frequently produced by the rigid stem. The diaphragm of the shield is so resilient that it adds another degree of pliancy to the stem, while the uterus finds in it an elastic cushion. By the aid of this vaginal portion, not only is the disagreeable tamponading abolished, but the vaginal walls are stayed, and by it the stem is made to assume any desirable angle by changing it into a forward, backward, or lateral eyelet. The instrument in this way can be adjusted for the treatment of every form of uterine flexion. The location of the socket is also easily altered by rotating the band. As we have seen, without withdrawing the instrument, we can readily ascertain the position of the uterus by introducing a probe within the cavity of the stem, in the same manner as we introduce the uterine sound : we thereby avoid the irritation produced by the removal and re-insertion of the instrument, and the objectionable manipulation of sounding the uterus. This feature of the instrument will be recognized as extremely advantageous. At the present time, I cannot see how this pessary can be improved upon. It will be noticed that, while it permits all the normal movements of the uterus, it insists upon a return to the regulated position ; also, by its perfect

flexibility, it protects the uterus from concussions, from sneezing, coughing, etc.

While I regard this instrument as perfectly safe when intelligently employed, I would not be understood as advocating its indiscriminate use, for if any physician presumes to treat the uterine cavity with the same indifference shown the vagina, he will assuredly encounter disaster and defeat. Therefore, he should be prepared to proceed cautiously and with extreme gentleness. He may expect to be obliged to remove the stem, within a few hours after its insertion, as its presence not unusually provokes severe uterine colic and reflex disturbance, but these are by no means an indication that the treatment must be abandoned, for ultimately these irritable subjects frequently furnish the most satisfactory results. In a day or two after removal, the stem should be reinserted, when it will be found that the uterus is decidedly more tolerant. In this manner the difficulties are gradually overcome, until the presence of the pessary is ignored. Considerable hemorrhage is not an unusual occurrence for the first few days, but this is not an alarming symptom, quite the reverse, for it disgorges the loaded capillaries, promotes absorption, and very frequently prevents hyperæmia. The patient should be advised to promptly remove the instrument on the inception of severe pain or general irritation, for the accomplishment of which the instrument must be secured properly, by a silk thread, to the anterior part of the vaginal

support. This precaution should be observed for at least a week when, as a rule, all symptoms of irritation will have subsided. The majority of patients will experience but slight discomfort from the presence of the stem from the first insertion. I deem it advisable, however, to guard against all emergencies.

Where there is a condition of stenosis of the uterine neck, it will be necessary to first dilate the cervix with a small sponge-tent before inserting the stem. The vaginal portion is made in three sizes, and should never be so large as to produce any stretching of the vaginal tissues. With careful observation of the foregoing suggestions, coupled with an intelligent practical experience, I am confident this pessary will grow in favor with the profession.

Dr. Goodell, in commenting upon the use of the stem pessary in his "Lessons in Gynecology," makes these suggestive remarks, after citing his former adverse opinions.

"But since then a riper experience has taught me a good deal about this pessary, and has wholly changed my views with regard to its use. I now hold that there are certain stubborn cases of anteflexion, and for the matter of that of retroflexion too, which can be satisfactorily treated in no other way than by the stem. Not a month now passes without finding one or more of my patients under its use. So changed indeed are my views on this point, that in a discussion upon this instrument, at

one of the meetings of the American Gynecological Society held in Boston, I stated that I had left two unmarried ladies in Philadelphia, each wearing this kind of pessary."

We might quote at length many other instances, wherein prejudice has been overcome by the substitution of a skilful use for the abuse of the means. We would recommend, as leading to a fuller confidence in this instrument, a discerning experience; for, if by the aid of ordinary bungling intra-uterine appliances, there has been much good accomplished, we may reasonably expect to obtain far better results, in proportion to the more effective means.

The offensive odor caused by the soft rubber is entirely counteracted by the use of "Condy's fluid" or, what is still better, a one-half per cent. solution of thymol injected into the vagina after the free use of warm water.

Dr. Mathews Duncan is in the habit of lubricating his soft-rubber pessaries with a solution of castile soap and salicylic acid, with which he secures perfect immunity from this unpleasant odor.

We have observed that, with those patients suffering from flexions and other concomitant symptoms, there exists a characteristic atony of the parts.

The uterine walls may be flaccid, often atrophied, or at other times passively engorged, presenting a condition of chronic blood-stasis.

If we extend our observations to the general condition of these patients, we will find them with an

unbalanced nervous organization, while the general blood circulation is unequally performed.

Now we should not overlook the fact that the blood-vessels are not the only agents in distributing the food supplies to the tissues, but are more properly the canals through which this supply is conducted, being dominated by the nerve-fluid.

To demonstrate our meaning take the phenomenon of digestion. After a full meal succeeds a state of mental apathy and drowsiness; the brain is comparatively inactive. Thus we are told that the digestive organs have engaged the nerve-power, for the time, in converting the food into blood-supply. Should the rights of these organs be violated, by the withholding of the nerve-energy and diverting it to the brain or other parts, digestion is suspended or but imperfectly performed. Should this perversion of the nerve-fluid be persisted in, a diseased condition of the digestive organs becomes established.

Now who are the women who suffer most frequently from the results of capillary inertia of the generative organs? Nine-tenths of these patients are what may be termed "brainy" subjects.

Their entire stock of neuric energy is exhausted in literary pursuits, in painting, or more especially upon music. These delicately organized creatures have in some way acquired the belief that to respect the grosser bodily functions, is highly unbecoming, and that it is their duty to starve out all animal

propensities for the fuller development of the æsthetic tastes. Against this outrage of nature's laws, the nerves cry out, while, like any other neglected or starved object in nature, the abused and ill-nourished organs assume deformities, and perform their functions in a miserable, imperfect manner. In the treatment of these cases, vigorous bodily exercise is paramount; nevertheless, while we may succeed in establishing a perfect general circulation and muscular equilibrium, the long-standing local deformity usually continues.

We therefore seek for some direct means whereby we may establish capillary activity in the parts, for the absorption of morbid deposit and the promotion of healthy tissue formation. Acting upon our knowledge of that indeterminate something termed electricity, which we believe lies at the fountain-head and governs the first inceptions of life, we have employed the galvanic intra-uterine stem-pessary.

We will not pause here to consider the hypothe sis if the nerve fluid and electric fluid be identical, but content ourselves with the demonstrable fact that nerve-life is profoundly influenced by the galvanic current. Neither can we hope to decide the debated point regarding the amount of electricity generated by the presence of approximated zinc and copper metals within the uterine cavity. The deductions of the savants (pro and con) upon this subject, if considered, would extend much beyond

the limits of this essay and would still leave the question undecided. Although we are unable to determine whether we are indebted for the results to the subtle fluid generated by the corrosion of these metals, or to the more material products of chemical decomposition, nevertheless we are convinced that, by the employment of this combination, we are enabled to accomplish the desired object, viz.: the induction of energetic capillary action.

Lawson Tait, F.R.C.S., Lond., in his article on the Uterus, remarks:

"In cases of amenorrhœa or dysmenorrhœa, we constantly find that the uterus, and also its associated organs, have been insufficiently developed, and have retained more or less of their infantile characters. This condition is readily to be diagnosed by the state of the cervix. It is small and nipple-like, the canal being correspondingly contracted, and there is almost always a marked degree of anteflexion. Very many instances of the 'infantile uterus' will be met with in young women, otherwise perfectly formed, and appearing in the most robust health. In these cases, iron alone is of no manner of use. What is wanted is a mechanical stimulus to the uterus, and that is best afforded by Simpson's galvanic pessary. The general treatment of these cases I have discussed in the chapter on the diseases of the ovaries, for they are the organs chiefly affected. Accompanying this arrest of development of the sexual organs, we have many diseases of the ner-

vous system directly due to it, more especially epilepsy. In hospital practice I have seen a large number of cases of epilepsy due to menstrual suppression or insufficiency, and which have completely recovered as soon as the function has been properly established.

"Stricture of the cervical canal, save in well-marked cases of arrest of development, or from traumatic causes, is not at all frequent, though stricture of either of its orifices is very common, especially that of the external os, already described. Stricture of the canal is best treated by its gradual dilatation by means of intra-uterine stems, especially the galvanic stem."

Also in his discussion on the Treatment of Ovarian Dysmenorrhœa:

"The last and most powerful aid is mechanical irritation of the uterus; but, as it is not free from risk, and therefore requires careful use, it is not always to be recommended. It is, besides, in the class of cases where the uterus is most at fault that it is least risky and most serviceable. The method of irritation I generally employ, as the most convenient and least troublesome, is the insertion of Simpson's galvanic pessary. This instrument has by some writers been very much decried, but I think by those only who seemed to have used it indiscriminately and without reference to a proper selection of cases.

"The irritation set up by the presence of a galvanic stem in the uterus is communicated indirectly

to the ovaries in a manner that is not as yet explicable, but that it has an influence is beyond doubt and, if it remain within bounds, it is in a large number of cases beneficial. A large experience has shown me that it is only in occasional instances that the stem cannot be borne, and that, if carefully watched during the first few weeks of its use, these cases are easily eliminated. In a case where I have been led to regard the use of the stem as advisable, I always begin with a small size, and after this has been worn for two or three months I change it for a larger one. For the first week after its introduction, it is not unusual for the galvanic stem to give rise to considerable discomfort and even positive pain, but this usually passes off if the patient keeps her bed for a few days, and there is no further trouble save from the leucorrhœal discharge, which is a part of the process. The action of the stem is not purely mechanical, as has been stated; for, very soon after its insertion, the zinc becomes coated with an albuminous deposit, from which the copper is free, and the zinc becomes corroded. It is certain, therefore, that there is a galvanic action set up, and the stimulating effects are due partly to this and partly to the interior of the uterus being constantly bathed in a weak solution of chloride of zinc. However produced, it is certain that the uterus rapidly enlarges under the action, and there is every reason to believe that the ovaries take part in the increased activity. If once the uterus becomes accustomed to the

presence of the galvanic stem, it may be worn for many months, and the longer it is retained the more permanent will be the benefit; but if after a trial of a few months, say four or five, there is no apparent alteration for the better, the attempt should be given up, and the case considered as hopeless.

"In a very large number of cases of incompletely developed ovaries, another remnant of infantile life is met with in an exaggeration of the normal curve of the uterus, amounting sometimes to complete anteflexion, and in this class of cases the galvanic stem is especially serviceable."

For the crude and irritating galvanic stems still in vogue, I have substituted one of alternate zinc and copper wires, in the same form as the steel wire spiral stem. This stem possesses the same features as the elastic stem already described, for which it can be substituted. It is light, and owing to the fineness of the wire its chemical action is more evenly distributed over the endometrium. It will be found a most efficient auxiliary in the treatment of chronic flexions, sub-involution, super-involution, or non-development, dysmenorrhœa, amenorrhœa, stenosis, and chronic endometritis. Recently I have devised a galvanic stem pessary on a more scientific basis, as far as electricity is concerned. Some electricians claim that, where the positive and negative metals are in direct and successive contact, the current of electricity is nil, or so short that it can in no appre-

ciable manner affect the tissues, as it passes directly from one metal to the other. Others claim that there can be no decomposition of any substance by oxidization without the evolving of electric fluid. All agree, however, that, if the current be made to traverse the tissues to some extent, the effect is proportionately increased. In conformity, therefore, with this principle, we devise a delicate battery of hard rubber, copper and zinc. On a vulcanite rod we place cemented zinc and copper rings, insulated with vulcanite rings. In this manner we cause the current to traverse the tissues, which are made the connecting medium. This form of pessary has also the advantage of being more durable, as the delicate zinc wire in the coil-stem soon disintegrates and cannot be repaired, while with this form the metallic rings can be easily replaced.

From observation and reason, I am convinced that this style of instrument is capable of doing great harm, as is the use of every active agent, when associated with ignorance of the principles involved. The galvanic stem pessary is not an instrument to be worn indefinitely, as might be inferred from some writings. Through chemical action the salts of these metals are formed, which, it will be understood, are capable of doing much injury to the tissues, if persistently brought in contact with them for a prolonged period.

Respecting the time that a galvanic stem may be worn, there can be no definite rule given, owing

to the wide diversity existing in uterine secretions.

This point must be determined, by the amount of corrosion noticeable upon the zinc wire and from the symptoms of irritation evinced. As a rule, we may safely advise the wearing of the galvanic stem, from two to four days, when it may be exchanged for one of hard rubber, or one of the elastic celluloid pattern, which should be worn for a week or ten days before the galvanic stem is reinserted.

We cannot too strongly condemn the culpable use of those stems, constructed of parallel bars of copper and zinc, as their prolonged presence in the uterus must necessitate lateral cauterization of this body, which will very likely produce distortion through subsequent cicatrization.

I have omitted to include in this paper all reference to medicinal interference, for obvious reasons. That the health of the generative organs is profoundly influenced by the condition of the general secretions, I regard as a fact too well established to require comment; and that it is as important to study faithfully how to correct the perversion of these secretory processes as it is to understand correct mechanical manipulation of uterine displacements, is equally patent; but it is the totality of the symptoms of each individual case, duly considered, which can alone guide us in the selection of the appropriate drug remedy. Nor is it the physical conditions only that we are called upon to consider,

for it is incumbent upon us that we step over the border-line into the psychical domain and include all mental phenomena in our analyses. As gynecologists, we cannot over-estimate this important feature of our specialty. There are frequent opportunities for observing remarkable instances of this psychological influence.

I have had patients whose uteri would retain their normal position so long as a happy mental state was maintained, but with the occurrence of grief would recur the displacement.

Who among us cannot recall instances in which a dysmenorrhœa that had resisted our best drug selection has disappeared, as if by magic, with an agreeable change of surroundings or upon the removal of the cause of some sorrow? We are acquainted with the familiar effects of mental perturbation upon the action of the kidneys, bowels, and heart; nor can we name a gland whose secretion is not in sympathy with the mind. As with the glands, so with all the tissues, all of which will reflect in some degree every passing emotion. Notice the semiotics of grief or disappointment: The facial muscles relax or contort, the limbs droop, the trunk is bowed, while the eyes grow lustreless and sunken. The mammæ lose their plumpness, become atrophied, and at times yield grief-poisoned fluid. These psychological phenomena are as familiar to us as the effects of air and sunlight, and like them are too oft forgotten, whereas they deserve our most serious

consideration. If these indifferent organs respond so readily to mental emotions, what may we not allow for mental domination over the generative organs, which we know to be much more intimately associated, through the sympathetics, to the great nerve-centres?

It is most befitting therefore, for physicians, to become less absorbed in their petty egoisms and art-devices, and to study more faithfully the lessons taught by Nature: for, it is only when we have learned to fathom the deep-sea soundings of cause and effect, underlying mental and physical conditions, that we may hope to successfully cope with disease.

DYSMENORRHŒA.

DYSMENORRHŒA.

Painful menstruation has for many years been a subject of profound interest throughout the medical world. None other has been more fruitful of controversy. This has of necessity been the case from the nature and prevalency of the disease, and like all others whereof the etiology is obscure, it has given rise to a diversity of doctrines. The measures employed for its relief have been questionable and heroic in proportion to this obscurity of etiology. We have authorities who teach that constitutional defect lies at the foundation of this affection, while, on the other hand, are those who as strenuously maintain that local abnormity is the chief source of the difficulty. Each of these cardinal doctrines is divided and subdivided, each faction claiming the superiority of its favorite theory over all others. Confronted with such a heterogeneous array of doctrines, the thoughtful beginner will naturally be confused in his selection of expedients. It would scarcely seem possible that all should be right, nor, on the other side, does it appear probable that doctrines emanating from such reliable authorities can be very greatly in the wrong. We will concede that

many of the theories advanced regarding dysmenorrhœa, when appropriately applied, are worthy of confidence, and that all of them in their proper sphere are philosophically founded, but we seriously question if any one of them is worthy of universal acceptance, as might be inferred from the unqualified commendation attending its presentation. We can but regard the spirit and tendency of these assumptions as decidedly reprehensible. Stimulated by a deep sense of the pernicious disposition of these too positively asserted dogmas, I have been for some time on the point of adding another contribution to this prolific subject, with a view to encourage a more analytic and conservative spirit. Hitherto I have halted, and even now hesitate to presume upon the teachings of those eminent savants of our own and other countries, and it is only my faith in the liberal and progressive temper of those whom I have the honor of addressing that gives me courage to proceed. Should I in the development of this essay ask you to meet me on hackneyed and commonplace grounds, without further apology I wish it to be fully understood that I am not unmindful of the position I occupy as one addressing a society of Fellows justly noted for their erudition. As you will recognize, the nature of the subject to which our attention is invited is such as to necessitate the tracing of familiar and well-trodden paths, for our object will be the study of the characteristics of some of these widely pro-

mulgated doctrines, as well as an endeavor to reach a practical solution of the problem regarding the successful management of dysmenorrhœa.

We will not supererogate by discussing the physiological phenomenon of normal menstruation, but turn our attention directly to the consideration of a few of the prevalent methods of treatment of painful menstruation which have been advocated by Macintosh, Simpson, Sims, and others.

Fifty years ago, Dr. Macintosh, of Edinburgh, held the stenosis theory and devised and adopted measures for the dilation of the uterine cervical canal by the introduction of a series of steel rods of graded diameters, by the aid of which (beginning with the smallest and increasing to the largest) he sought to relieve his patients. Acting upon this principle, Dr. Ellinger, of Germany, invented an instrument for the forcible divulsion of the uterus, in the same manner as the finger of a glove is distended by the glove-stretcher. In 1843, Dr. Simpson conceived the idea of enlarging the uterine canal by incision, and projected the hysterotome. This plan was subsequently modified by Dr. J. Marion Sims, in whom it has found its strongest advocate. A detailed description of any one of these operations is unnecessary in this place, as any physician who acquaints himself with his text-books and the medical literature of the day, is perfectly familiar with the particulars of these proceedings. We cite these well-known methods that we may in-

telligently propound the question, How far are these pioneers and their disciples justified in making such positive assertions as they do, regarding the merits of their advocated measures? Were we left to form our conclusions simply from the recorded opinions and experiences of these champions, we might believe that any one of these methods was beyond doubt the unfailing, universal remedy for this distressing malady. So authoritative are the writings of these advocates, that they cannot fail to exert an undue influence upon the inexperienced reader.

To better illustrate our position, and give definite shape to our argument, we will produce a typical quotation of these dogmas, and select one from the writings of that brilliant authority, J. Marion Sims, as an appropriate index of the literature treating the subject under consideration. It reads as follows:

"Menstruation may be attended by a general malaise, but should not, as a rule, be accompanied by any very severe degree of suffering. If there is much pain, either preceding its irruption or during the flow, there will generally be a physical condition to account for it, and this will be of a nature to obstruct mechanically the egress of the fluid from the cavity of the womb. The obstruction may be the result of inflammation and attendant turgescence of the cervical mucous membrane, whereby this canal becomes narrowed merely by the tumefaction of its lining coat. But by far the most frequent

cause of obstruction is purely anatomical and mechanical. For instance the os and canal of the cervix uteri may be preternaturally small, or the cervix may be flexed; or these may be complicated by the presence of a polypus, or with that of a fibroid tumor, in either the anterior or posterior wall of the uterus, and occasionally in the antero-lateral portion. Of 250 married women who had never borne children, 129, or more than half, had pain of an abnormal kind attending the menstrual flow. I have been in the habit of dividing these into two classes, calling the one painful, and the other excessively painful, or dysmenorrhœal. Of these 129, 100 were painful, or 1 in $2\frac{1}{2}$ of the whole number; 29 were dysmenorrhœal, or 1 in $8\frac{6}{10}$. Of the 100 painful menstruations, 58 had anteversion, or more properly speaking anteflexion—17 of these had fibroid tumors in the anterior wall; 25 had retroversion—7 of these had fibroid tumors in the posterior wall; and in 17 the position was normal, one of these having a fibroid tumor. Of the 29 dysmenorrhœal cases, 23 had anteversion—14 of these had fibroid tumors in the anterior wall; 3 had retroversion—all of these had fibroid tumors in the posterior wall; and in 3 the position was normal. Of the 100 cases of painful menstruation, the os was normal but in 6; unnaturally contracted in 90; otherwise abnormal in 4. Of the 29 cases of dysmenorrhœa, properly speaking the os was not normal in a single case, being contracted in 26, and otherwise abnormal in the

other 3. The following tabular statement presents the particulars at a glance:

"Of 100 cases of painful menstruation, os was normal in but 6; contracted in 90; cervix was flexed in 61; congested in 7; there were polypi in 2.

"Of 29 cases of extremely painful menstruation, os was normal in 0; contracted in 26; cervix was flexed in 23; had polypi in 2; was congested in 1.

"From this it would appear that the pain of menstruation is almost wholly due to mechanical causes, for of the whole 129, only 8 had engorgement or congestion of the lining membrane of the canal of the cervix, and some of these were complicated either with flexure of the cervix, or with fibroid growths in some portion of the body of the uterus. I would not deny that menstruation may be painful merely from a congested state of the cervical membrane, where there is no fibroid growth, no polypus, no contracted os, and no flexure of the cervix; but such cases are rare, while the great majority of dysmenorrhœal cases have a contracted os and a narrowed cervical canal, or a flexed one. In some instances the os is not larger than a pin's head, or it may be large enough to admit a No. 4 bougie. Again, the os may be quite large enough, but the canal may be flexed so as to form a valvular obstruction to the egress of the menstrual fluid. Sometimes we find the os small, and the canal flexed without painful menstruation; and here the cervix is not indurated, but soft and elastic to the touch.

"Of the 129 cases of painful menstruation, but 20 had the uterus in its normal position, while 81 had anteversion (31 of these with fibroids in anterior wall); 28 retroversion (10 of these with fibroids).

. . . . . .

"According to the facts stated above, it would seem that the pathology of dysmenorrhœa is yet to be written. I am fully of the opinion that it is simply a sign or symptom of disease, to be found in some abnormal organic condition. This may be inflammation, or it may be the cause of inflammation, or it may exist without it. But whether inflammatory or not, its action is mechanical. I lay it down as an axiom, that there can be no dysmenorrhœa, properly speaking, if the canal of the neck of the womb be straight, and large enough to permit the free passage of the menstrual blood. In other words, that there must be some mechanical obstacle to the egress of the flow at some point between the os internum and the os externum, or throughout the whole cervical canal.

"Dr. Bennet says: 'I have always taught that menstruation may be painful, from its dawn to its close, without any mischief or impediment existing of any kind whatever.'

"Many years ago I believed all this, because Dr. Bennet and others said so; but now I do not believe in any such doctrine, because experience has taught me otherwise. There is no such thing as what is called 'constitutional dysmenorrhœa.' There was

a time when we looked upon dropsy as an entity, a disease in itself; but now we know it is a symptom of various diseases. It is a symptom of disease of the heart, of the kidneys, of the liver, or it may follow hemorrhages or diarrhœa. So is it with dysmenorrhœa: it is only a symptom of disease, which may be inflammation of the cervical mucous membrane, retroflexion, anteflexion, fibroid tumor in one wall of the uterus or the other, contraction of the os internum, or os externum, flexures of the canal of the cervix, either acute or gently curved, either at the os internum, at the insertion of the vagina, or extending throughout the whole length of the canal—all of which are but so many mechanical causes of obstruction, which must be recognized and remedied if we expect to cure the dysmenorrhœa. We do not talk of constitutional toothache, of constitutional colic, or of constitutional fractures, or constitutional dislocations. Nor should we speak of constitutional dysmenorrhœa. This is but a high-sounding term that means absolutely nothing. The fact is that most of the diseases of the uterus are as purely surgical as are those of the eye, and require the same nice discrimination of the true surgeon. And if we fail to detect the abnormal condition that produces diseased manifestations, whether of sensation or secretion, it is plainly our fault. For of all organs the uterus is now most subservient to the laws of physical exploration; and in every case of diseased action, if we cannot map out accurately the peculiar

condition of the uterus producing or accompanying it, it is simply because we do not apply our knowledge of these physical laws to its investigation."

Dr. Sims continues in his oracular style, and after mentioning the theories of others (simply to dismiss them as worthless, in which category he includes that of Mackintosh, which he pronounces uncertain, dangerous, and painful) he goes on to explain his method of procedure. He asserts that—

"The whole philosophy of the operation consists in the opening of the canal, and keeping it open to allow the easy passage of the menstrual flow."

Following is a résumé of a number of selected cases, together with a detailed description of his mode of slitting the cervix uteri for the enlargement of its canal. That this operation is a most reliable corrective in the treatment of dysmenorrhœa seems very plausible, and the sentences read admirably, and now what are the results of the foregoing arbitrary assertions?

The subordinate practitioner of a credulous cast of mind (and of these there are not a few) naturally infers from the casual reading of these statements that he has at last in his possession a reliable remedy for this obstinate malady, and straightway arms himself with a hysterotome, and proceeds to incise the ossæ of all his dysmenorrhœic patients.

The operation is performed to the best of his ability, in accordance with the prescribed rules. But months go by, and the majority of these sufferers

are still unrelieved, while in due course of time he discards the vaunted uterotome, which lies rusting upon his shelf. Any of you who are personally acquainted with the practical working of this theory can say if my picture is overdrawn.

To those minds imbued with the belief in the proverbial veracity of figures, a portion of this quotation will doubtless seem at first sight conclusive, but to those who have studied the nature of statistics they will carry but little weight: not that we would be understood to question in the slightest degree the validity of this numerical synopsis, but we know that a counter-statement could be readily produced which would be equally truthful. To illustrate:

During the short period I devoted to visiting the Samaritan Hospital in London, I saw many cases of pinhole ossæ unassociated with painful menstruation. I have also had numerous cases of this kind in my private practice. What gynecologist has not seen scores of ossæ which did not present normal type, but which nevertheless permitted the flow of the menstrual fluid without pain? Or, conversely, what physician has not observed frequent instances of dysmenorrhœa without any discoverable structural abnormity? In this manner we could easily institute a counterbalancing summary. Indeed, the versatility of figures as applied to medicine is as remarkable as the changes produced in the kaleidoscope; and they usually insist upon assum-

ing an accommodating conformity to the pre-existing prejudices of the statistician.

Therefore, while we acknowledge that many of the dysmenorrhœas are associated with and no doubt are frequently caused by distorted or contracted cervices, nevertheless we respectfully maintain that cases are *not rare* in which severe dysmenorrhœas exist where there is no apparent organic defect. Consequently we beg leave to dissent from Dr. Sims' axiom, "That there can be no dysmenorrhœa, properly speaking, if the canal of the neck of the womb be straight and large enough to permit the free passage of the menstrual blood."

Again, Dr. Sims taboos the term "constitutional dysmenorrhœa" as "a high-sounding term which means absolutely nothing," etc.; nevertheless we are all aware of certain instances wherein this term would certainly be quite appropriate. If we read this part of Dr. Sims' article critically, we cannot but feel impressed that the learned doctor reasons unfairly and with evident partiality, while the manifest design of the argument is to prejudice the reader's mind in favor of his advocated theory. If the term "constitutional dysmenorrhœa" is not a purely scientific one (and, by the way, I have never encountered it outside of Dr. Sims' book), it cannot be properly classed with "high-sounding" terms, and it surely is expressive. How else can we better designate those cases which unquestionably depend upon a vicious state of the secretions with no discernible local deform-

ity? I do not think that any intelligent, unprejudiced physician will question that there are cases as purely constitutional as certain forms of prosopalgia, gastralgia, and kindred diseases. It is an established fact that the psychical condition as frequently influences the menstrual function as the evils of obstructed molimen are reflected upon the brain. How else can we account for those frequent spontaneous cures through influences operating upon the mental faculties?

We might continue indefinitely adducing reasons for dissenting from these too sweeping assertions in the promulgation of the mechanical obstruction theory. If Dr. Sims was justified in making such unqualified statements, how can he explain the frequent failures in this operation? Those of us who have followed his instructions to the very letter, in the treatment of flexion for the cure of dysmenorrhœa, must acknowledge that we have oftener signally failed than succeeded in curing the distortions or relieving the painful symptoms. It could be argued with some effect that this non-success might be due to an unskilful performance of the operation. We will, therefore, cite the views of an equally eminent authority. Dr. Sims states in his writings that Dr. Emmet assisted him in several hundred operations of hysterotomy, and leads us to believe that these cases were, with the exception of two or three, successful. Dr. Emmet, however, writes in 1879 regarding Dr. Sims' operations as follows:

"Having had the opportunity of observing the results of his practice more closely than he could himself, and also by watching my own, I am satisfied that neither operation will permanently relieve any case unless the flexure is confined to the neck and is below the vaginal junction. While the backward operation as proposed would relieve a moderate flexure, the lateral one, even if extended on each side to the vaginal junction, could not accomplish so much unless the posterior flap, in the process of healing, retracted sufficiently to clear the seat of stricture, which it could not do. The dysmenorrhœa invariably returns after a few months, so soon as the more revulsive effects of the operation have subsided."

This adverse opinion, from one whose experience renders him especially competent to judge concerning the merits of the procedure, changes somewhat the complexion of affairs.

Again, how can he account for those persistent dysmenorrhœas we sometimes witness in multiparous women, whose uteri are perfectly normal and well dilated, of which the following is an instance: Mrs. E——, aged twenty-six, mother of three children; always menstruated painfully; apparently a robust, healthy woman. Ten months after the birth of youngest child, menses recurred with severe pain. The following period returned with increased severity, for the relief of which I was summoned. The paroxysms were most excruciating. After

the cessation of the flow no abnormity could be discovered. The os was stellated and decidedly patulous, the uterus normal as to size and position, with no unnatural sensitiveness. The following period was still more alarming. So great was the patient's suffering that she became delirious and her cries could be heard at a considerable distance from the house. It was then deemed expedient to call in two eminent practitioners, who were noted for their proficiency in this department. But the more careful examination failed to discover any abnormity of the generative organs, save the slight laceration of the cervix. Thus matters continued with no improvement for nearly a year, by which time the patient's nerve system was greatly impaired, and a general hyperæsthesia developed. The patient was finally persuaded to try what a "change" would do, and went to visit some friends a few miles distant. The result was that she became pregnant in a few weeks, improved steadily, and completed happily her period of gestation. Her subsequent history I have not learned, owing to removal to distant parts; but judging from her previous experiences, it is most probable that her troubles again recurred.

Now every experienced physician will recognize that this is by no means an isolated case, but a just representation of that class of patients, not at all rare, of whom Dr. Bennet says: "Menstruation may be painful, even acutely painful, from its dawn to

its close, without any mischief or impediment existing of any kind whatever." And we do not believe this, simply because Dr. Bennet says so, but because we know from experience that it is true.

We have selected this quotation from Dr. Sims, as already stated, to elucidate the nature and tendency of a certain kind of literature which we encounter on every hand in our medical writings. One can scarcely peruse a periodical of the day, without meeting with eulogistic articles from the pen of some enthusiast, regarding a certain operative procedure or remarkable panacea, in the application of which (judging from the spirit of the letter) the writer has been infallible. Nor is this prejudicial style of writing peculiar to amateurs; for as we have just seen, it is as frequently manifested in those who are widely celebrated for their skill, unlimited experience, and originality of thought. We have little doubt but what many of these writers intend their teachings shall be practised conditionally; but unfortunately they seldom express these intentions, but leave them to the discernment of those who are often notably indiscriminating.

Such literature is most deplorable from its misleading disposition.

Where suffering and death are in the balance, the spirit of emulation should be kept strictly in abeyance, and our failures conspicuously displayed as so many beacon-lights, instead of parading simply our successes, which are not unfrequently so many jack-

o'-lanterns of survivals, which are made to dance before our minds only to lead us into pitfalls.

We have now reached a fitting place for the contemplation of some of the forms and causes of dysmenorrhœa. We recognize that these considerations extend over a wide field. The cause may depend solely upon an impoverished condition of the system or vitiated state of the secretions, thereby engendering mal-nutrition with its concomitants—neuralgia and tissue degeneration. Or it may be dependent upon an abnormal condition of one or all of the generative organs. Occasionally, we encounter cases of a purely nerve or brain origin, which may be classed with those obscure neurotic affections of which certain forms of vaginismus and pruritus are types. Sometimes several of these causes seem to be combined. The symptoms vary from the dull, dragging pain to the most violent paroxysms. The seat of the pain may be reflected to remote parts, as is sometimes witnessed in supra-orbital neuralgia or hemicrania, or the pain may be centred in one or both ovaries; in fact, there is not a point of the body to which the pain may not be referred, but, as a rule, the suffering is manifested at the seat of the mischief—in the organs most actively engaged in the performance of the function.

There are three distinct forms of this disease—congestive, neuralgic, and obstructive. Each of these will admit of subdivision. The congestive

form, owing to the very nature of the menstrual function, is the most frequent. At every recurrence of the molimen there is a general erethism of the vascular system, with a decided turgescence of the generative organs. During this period the uterus (which is composed of a net-work of capillaries and erectile tissue) is highly engorged. For the relief of this condition, the epithelial cells which line the injected endometrium are exfoliated, and the delicate vessels beneath are thereby permitted to disgorge, and by this depletion nature has established a natural safety-valve, called the menstrual flux.

We are all familiar with the phenomena of congestion in other tissues and organs of the body, as for instance:

The light of day to the normal eye is grateful, but to the diseased eye, irritated by congestion, it is intolerable. The periosteum, or any of the serous membranes, are in their normal condition indifferent to contact, but when their capillaries are unduly injected they become exquisitely sensitive. So, in congestive dysmenorrhœa, we have a chronic blood stasis, in which the capillary walls are weakened and dilated. Coexistent with this imperfect constringency of the capillaries, is always found a sensitive, impaired state of the nerve filaments, each reflecting and abetting the other's deficiency, and in this manner a hyperæsthetic, degenerate condition is established, in which predicament the monthly nisus finds the generative organs. With increased

engorgement ensues a greater dilation of the passive blood-vessels and pressure upon the sensitive nerve filaments, developing a proportionate amount of pain. For the relief of this over-fulness, the irritated nerves call upon the muscular fibres of the uterus to contract, and by painful expression is accomplished that which is normally performed unconsciously by capillary action.

This is a concise and fair representation of what takes place in the uterus, in the congestive form of dysmenorrhœa. The ovaries and their investments, also the peritonæum, may be involved in the situation. Patients thus afflicted are usually of phlegmatic temperament, of lax muscular fibre, and easily fatigued. As may be inferred, the general vascular system is depreciated, which is most prominently marked in the portal system, giving rise to intestinal derangements. Tight lacing also favors this form of dysmenorrhœa, from its unavoidable tendency to impede the free return of venous blood to the heart. The etiology of this affection suggests the treatment, which may be presented as follows: A certain amount of daily out-door exercise, walking, or horseback riding. Taking the air in a luxurious carriage is of little benefit. The bowels should be regulated by attention to the diet and the appropriate remedy. Cathartics and the use of the syringe, as well as straining at stool, must all be strictly prohibited. Coffee, tea, and condiments should be avoided. A cold sponge or shower bath every morning.

During the time intervening between the periods, use once or twice a day one quart of salt water, as warm as can well be borne, as a vaginal douche, followed immediately by half a pint of cold water. This is a highly valuable adjuvant in restoring the proper tone to the impaired capillaries of the parts. These directions, with others which will naturally suggest themselves, if faithfully practised, will restore the majority of this class of patients surely and satisfactorily to a healthy condition, which no amount of drugging could ever accomplish, while surgical interference would be exceedingly reprehensible. It might by its depleting or revulsive effect relieve for a period, but ultimately it would be a matter of regret.

In the catalogue of congestive dysmenorrhœas may properly be placed that phenomenon designated membranous dysmenorrhœa. This anomaly manifests itself by the extrusion (during the menstrual epoch) of an organized extraneous material resembling the lining membrane of the uterus in the early stage of pregnancy. So faithful is this likeness in certain instances—and owing to the suspicious circumstances usually associated with those in whom this affection is manifested—that some authors regard it as a mark of false or incipient conception.

A *résumé* of the views of leading authorities (although evincing considerable diversity of opinion) sustains the following etiological theory:

The hyperæmic condition of the endometrium in-

duces a plastic exudation of lymph which becomes organized into a deciduous membrane, with an excessive development of epithelial cells. During the inauguration of the catamenia the dehiscence of this membranous deposit is accomplished, which is ejected in shreds, patches, or entire, at the time of the menstrual flux, accompanied by severe expulsive pains and symptoms of obstruction.

Fortunately, this troublesome affection is rare. The pathogenesis doubtless rests with the degenerated condition of the endometrium and parenchymatous structures, with a perversion of the follicular secretions. This anomaly is amenable to the treatment for congestive dysmenorrhœa. In addition to these, the characteristic indolence of the parts may be corrected by the monthly application of the solid stick of exsiccated sulphate of zinc, which should be inserted and allowed to dissolve in the uterine canal. The occasional wearing of the galvanic stem, by its stimulating effect, will correct the torpid capillary circulation and perverted follicular action, and in this way prevents the extraneous deposit.

Under the head of neuralgic dysmenorrhœa, are classed those cases in which the most attentive investigation fails to discover any textural abnormity, such as enlargement or deflexion of the generative organs; there may, however, exist atonic atrophy of the uterus or ovaries. The patients suffering from this form of disease are usually of delicate, impressionable temperaments, given to the cultivation of

æstheticism. They are whimsical and capricious in their tastes, subject to mesmeric influence, ofttimes seeming to live in the border-land between the spiritual and material spheres. They frequently indulge in tears without any assignable reason for so doing. Their imaginations are vivid, and their minds disquieted so that they seldom sleep well. The sensitiveness of the skin is greatly exaggerated, which may be general or circumscribed. In fact, the senses are all so peculiarly and acutely perverted, that the sight, touch, or sound of certain generally indifferent objects produces uncontrollable sensations and unaccountable aversions or desires. The picture indicative of these patients is one replete with the lights and shadows of a profoundly disturbed, imperfectly nourished, neurotic organization. The muscular system is generally greatly impaired, and consequently the patient is easily fatigued.

The renal function is performed in a fitful manner, and the urine frequently gives an alkaline reaction. The scrofulous diathesis predominates, with its concomitant indications of mal-nutrition. The sufferings of these patients during the menses are exceedingly poignant.

Shooting, darting, piercing are the terms usually employed in the description of their distress. The pains usually radiate in the direction of the thighs and groins, or may be transmitted through the medium of the sympathetics to the head or to a definite point beneath the left breast, and it is not un-

common to find the heel the point of suffering. The menstrual flow is usually scanty and of an impoverished, vitiated character. So exhausting are these periods of anguish, that the prostration following is scarcely overcome before a repetition. No wonder that these unfortunates are ere long reduced to miserable wrecks, mentally and physically.

Now what means have we at our command for the relief of this serious complication of anomalies? Search as we may, we will not find a more trying and perplexing situation. Shall we begin our efforts by the display of our art, and strive, by the administration of selected drugs, to combat this intractable disease and by them build up the shattered constitution? Shall we not rather, in the first place, consider that which is paramount, namely, the correction of the mal-nutrition by the breaking up of pernicious habits and instituting a philosophical régime. In no other way is it possible for us to succeed in the management of this troublesome disease. He who pursues merely the phantom of drug administration will inevitably meet with humiliating defeat.

In the first place it is absolutely necessary that the physician be master of the situation. It is not enough that he distinguish himself by his perspicacity in tracing the relation of cause and effect, but he must be master of his patient as well.

It is right here that many worthy physicians have failed in their best endeavors, and myriads of cura-

ble patients have relapsed into hopelessly confirmed invalids. For a successful termination of our treatment, the entire confidence and full coöperation of these patients are necessities. When we speak of "the mastery," we do not wish to convey the idea of a domineering spirit, for such would only serve to irritate the patient, and so defeat our object; but it is that undefinable will power, gentle yet determined (which these freakish, dependent creatures take pleasure in respecting), that is effectual.

Let us begin our therapeutic consideration by noticing the unbalanced state of the muscular and nervous systems, the former being degenerated and entirely subservient to the latter. Now it is as important for the nerves to have a firm foundation in the muscular tissues as it is that machinery should possess reliable bases. This lack of counterpoise thrusts these unfortunates into a most pitiable state. Their sensitive, unstable nerves are subject to every passing influence; so vivid are their imaginations that a fixed fancy becomes a reality. So completely are the tissues at the mercy of these fanciful, penetrative brains, that I sincerely believe a purely ideal condition in due time may be fostered into something closely resembling the reality, if not actually inducing it. It is highly important, therefore, that we be very guarded in our statements, and more especially should we avoid creating any unfavorable impression in all necessary local manipulations. Otherwise, by a word or look irreparable mischief

may be wrought. Hope being the mainstay of these patients, the physician will do well to faithfully cherish it by judicious words of encouragement. Indeed, it is impossible to over-estimate the importance of psychical influences in the management of these cases.

From the foregoing observations, it is obvious that we will deem it our chief aim to correct the atony of the muscular tissues. This object can only be attained by a rational attention to that all-important factor, exercise. Patients possessing a laxity of fibre should be made to weary themselves daily by a designated amount of exercise in the open air, followed by a season of complete rest upon the couch. They should be taught to contemplate and appreciate the value of sunlight and air, as witnessed in their effect upon vegetable as well as animal life. Through the appropriation of sun and air, and the salutary physiological effects of exertion, the tissues are rid of their effete products, and the demand for nutrition will be proportionately increased. Should personal exertion be contraindicated, the entire muscles should be thoroughly kneaded twice daily by a healthy nurse. This manipulation assiduously carried out will prove wonderfully advantageous. The digestive processes are entitled equally to our supervision, for the successful treatment of this affection depends greatly upon the nature of the food ingested. Nature suggests that the most commendable article of diet is pre-

sented in the form of milk, and in the majority of cases this is entitled to our entire confidence. When taken in large quantities, as it should be in these instances, it manifests its grateful effects by its soothing as well as its strengthening properties. This article of diet is especially beneficial to those patients in whom the scrofulous taint is well pronounced, a full diet of milk being our most reliable anti-scorbutic. Unfortunately, we now and then encounter persons whose idiosyncrasy is a decided intolerance of milk. In such cases, a generous vegetable diet, with meats in which fat predominates, must be employed.

Notwithstanding the generally accepted theory of meat diet, I am convinced that it is not practicable in irritative diseases, for it unquestionably excites an irascible, petulant disposition. That a flesh diet engenders a restless, aggressive spirit, is a generally recognized fact with keepers of carnivora. Therefore, when we admit animal food it should be principally of fats. A mixed diet of meat and milk is never advisable, as the two seldom assimilate properly.

The enervating and irritating effects of tea and coffee, as beverages, demand due attention, as also all forms of stimulants, which, by their secondary action, produce depression.

The injurious excesses of society must be avoided, and the patients induced to retire early to bed.

The use of the vaginal douche, using alternately

hot and cold marine water (natural or artificial) as previously recommended, also lavement of the spine by alternate hot and cold wet sponges each morning, will be found decidedly beneficial in imparting tone to the nerve-centres and in strengthening the will power. An occasional change of scene and duties will often work magical results.

The foregoing intimations indicate the essentials of the general treatment of neuralgic dysmenorrhœa. The field is an exceptionally wide and diversified one, so that the most exhaustive dissertation, as regards management, can be but suggestive at best.

The physician must be prepared to have his skill and patience taxed to the utmost, for these are among the test cases which decide if, in the practice of our profession, we are able to bestow upon humanity the benefits to which we lay claim.

Occasionally we find in adults uteri of almost infantile proportions. Several such instances have come under my observation, and we frequently receive intelligence of such cases. The uterus may also be spindle-shaped with attenuated walls and contracted canal. All examples of this nature that I have seen have been associated with extreme pain during the molimen, and we would naturally infer that this condition would invariably induce dysmenorrhœa, through the unavoidable restriction of capillary action which must accompany this deformity. For the development of these uteri, we combine, with other hygienic regulations, the use of

the galvanic stem pessary, which should be worn two days during the week. This invites a more active vascular action of the parts with a consequent growth. In one case which I treated with the stem, the uterus developed from half the usual size to the normal dimensions, and this was accomplished without a single objectionable symptom being produced; but on the contrary, the patient steadily improved in every respect until her health was fully and permanently established.

To avoid repetition, we will defer a more detailed description of the management of the stem, until the last division of our paper. It is hardly necessary to state that the length of a uterine stem should be graduated to the length of the uterine canal, making it one-fourth of an inch shorter.

We have now reached the third division of our subject, viz., painful menstruation, associated with uterine flexures or contraction of the calibre of the uterine cervical canal.

The assumption that the bending of the uterine body upon itself, or the contraction of the canal, would necessarily impede the passage of the menstrual blood, is a natural inference; and that this obstruction would give rise to proportionate painful disturbances, seems a consistent supposition.

This is the theory taught by the majority of authorities, and the one generally entertained by physicians. Opposed to this mechanical theory,

however, there stands a class of physicians of equal perspicacity and professional attainments, who maintain that a flexure of the uterus or a contraction of the canal, as usually found, does not *per se* cause dysmenorrhœa.

So the question naturally arises: May we not have overlooked the profounder rationale of the situation, and closed too readily with the more superficial conjecture? How frequently we stand amazed at our misguided credulity, when stimulated to make accurate and independent investigation of previously cherished doctrines. So, in this instance, the mass of practitioners have accepted the obstruction theory, simply because it wears the features of plausibility, as it is usually presented. If we will take the trouble to analyze this theory intelligently, we will soon discover many reasons for questioning its validity. Foremost among the opponents of the obstruction theory stands that eminent authority, J. Matthews Duncan, whom I once heard remark: "I have always taught and I still maintain that a woman may bleed to death by the transmission of blood through an aperture no larger than the eye of a cambric needle, and that within a few hours." This remark was made at the close of a spirited discussion of an interesting paper, by Dr. Herman, on the relation of anteflexion of the uterus to dysmenorrhœa, read before the Obstetrical Society of London, October 5, 1881.

The object of Dr. Herman's paper was to prove

that anteflexion did not necessarily produce painful menstruation. He argued that, as there was no anatomical evidence that anteflexion was any hindrance to the menstrual flow, it therefore did not interfere with the function. He also claimed that well-marked anteflexion is present in nearly half of the women who have not borne children (from which we conclude that Dr. H. retains the prevailing stereotyped idea of the normal uterine position), and that dysmenorrhœa was practically as common when the uterus is straight as when it is anteflexed; also, that painless menstruation is as common when the uterus is anteflexed as when it is straight, etc.

Dr. Herman summarized statistics to strengthen his position, but these were pretty effectually disposed of in the after discussion, and by more weighty counter-statistics. Although Dr. Herman had a fair number of followers, the majority were emphatic in their expressed opinions sustaining the obstruction theory. While Dr. Duncan opposed the mechanical obstruction doctrine, he believed that flexions did favor painful menstruation. In order to judge fairly of the merits of an essay, it is a decided advantage to be able to study personally the characteristics of the writer. In this instance the writer belongs to that class of active, nervo-sanguine temperaments who feel intensely upon any subject that has enlisted their services. Without meaning the least disparagement, Dr. Herman impresses one more as an advocate than as an

impartial, discriminating judge. I make these allusions, from the fact that a synopsis of Dr. Herman's essay has gone the rounds of the leading journals, and must have been a matter of surprise to many whose experience led them to opposite conclusions. In the debate which followed the reading, the weight of argument went to prove that flexions did create severe menstrual disturbances; that the dilatation of the canal by the use of the metrotome or uterine dilator might relieve temporarily, but seldom, if ever, permanently; that the flexions did not necessarily obstruct the flow. But here the discussion ended, with no attempt to explain the cause and effect relation which exists between uterine distortions and dysmenorrhœa. Now, while we possess abundant evidence to prove that flexions of the uterus are almost invariably associated with pain during the molimen, we have yet to find a rational recorded explanation which satisfactorily demonstrates the modus operandi of this abnormity.

True, we are shown diagrammatic illustrations representing the uterus acutely bent, with a spur jutting into and occluding its canal; and, given such a state, the mechanical obstruction of the menstrual flow would be a rational inference. Such condition, however, is seldom, if ever, the reality, and exists only in the imagination. That the uterine walls are in contact at the angle of flexure we acknowledge, and so they should be and are, in the normal state. They may be somewhat more closely approximated

in the flexed than in the normal state, but it is doubtful if this approximation is increased to a pressure sufficiently great to obstruct the flow. That the mechanical obstruction of the menstrual blood is not the cause of these painful symptoms accredited to it, is demonstrated by those cases of flexed uteri which, during the first hours of the molimen, may be accompanied by extreme suffering and apparent obstruction—but in a few hours it is evident that the canal is amply pervious for an abundant flow; whereas, if the flexure was the cause of the pain, it would persist so long as the flow continued. The term "flexion," by the way, does not fully express the actual shape of the uterine canal in this abnormity. Antecurvature and retrocurvature are more accurate expressions. Again, most authors advance the theory that the blood collects in the uterine cavity above the point of flexure, and forms a clot which excites the uterus to contraction for its expulsion. This also looks quite reasonable until we stop to consider the dimensions of the uterine cavity in multiparous women, the class usually afflicted with dysmenorrhœa. This cavity, averaging from two to two and one-half inches in its entire length and only a trifle over an inch above the internal os, cannot possibly contain a very large accumulation. Besides, all the menstrual coagula that we have ever examined have been so friable that it is difficult to conceive how they could act as a sufficiently resistant substance to demand a powerful

contraction of the uterus for their removal. Moreover these coagula are not peculiar to flexed uteri, but are as often formed in uteri that are straight and patulous. Furthermore, the clot-formative process displays no fixed ratio to the degree of suffering, as we often observe it unassociated with pain, while, on the other hand, a flow meagre in quantity and without clot-formation may produce the severest dysmenorrhœic suffering, of a spasmodic type. I do not wish to be understood as positively asserting that clot-formation never induces dysmenorrhœic symptoms. My object is to present to each mind for further consideration the fact that we have overestimated its importance, to supply the want of a better explanation of these painful uterine spasms.

The theory of blood coagulation was one of great importance to former pathologists, in explaining inflammatory processes, and we have many reasons for believing that the state of the blood, coupled with the condition of the exuding surface, has much more influence in creating menstrual clots than the mere pocketing of the blood as is generally believed. From the above and numerous other deductions, I am convinced that we must seek further for the cause of the evident relation between flexions and painful menstruation.

For some time I have been looking for the promulgation of the following theory, but I am not aware that it has as yet been advanced. Physiological anatomy teaches us that the uterus is com-

posed of a network of capillaries and erectile tissue, subject to periodical engorgement, during which period the uterine tissues are in a state of tension. This turgescence results in the rupture of the minute capillary points distributed beneath the epithelial cells that line the endometrium; which disintegrated epithelial lining is exfoliated and discharged with the flow. In this way the highly injected capillaries are disgorged, and the tension throughout the uterus and pelvic tissues is relieved.

Leaving the menstrual phenomenon for a moment, we turn our attention to an analysis of flexions. We have noticed that there are two natural divisions: One associated with atony, wherein the uterine walls are flabby or attenuated, with no inherent resistance—the womb bending on itself simply in obedience to the influences of gravitation. The other displays tissue metamorphosis as a result of inflammatory exudation. There has been a predetermination of blood with stasis at a definite point. At the centre of this seat of congestion, there has occurred an interstitial deposit of lymph. This lymph, interposed among the spongy erectile tissues of the vascular uterine body or cellular adnexa, becomes organized and solidified, just as we witness it in external phlegmonous processes. This not only results in a certain amount of capillary obliteration, but it agglutinates surrounding areolar tissues and produces an arbitrary restriction upon all the enclosed filaments of nerves, blood-vessels, and approx-

imated tissues, and may even involve a portion of the peritonæum. During the passive condition of these parts, this amalgamation of the tissues may be no appreciable inconvenience; but, when the monthly engorgement takes place and the erectile tissues become turgid and attempt to straighten, the contracted tissues and neuria are placed in a state of tension; consequently much pain ensues. The embedded nerve-filaments communicate their sufferings to the uterine nerve-centres, and through them the uterus is excited to spasmodic contractions, which add greatly to the suffering in precisely the same manner as involuntary muscular contractions aggravate the painful erections attending chordee. As soon as the flow is freely established, and the turgescent parts are depleted, flaccidity is restored and the paroxysms of pain subside. From careful observation I am confident that these plasmata are directly involved in causing these painful symptoms.

We approach the discussion of the treatment of distorted uteri, for the cure of dysmenorrhœa, with considerable hesitation. So many theories and methods have been advanced and enthusiastically adopted, only to be discarded after bringing reproach upon the advocate, that one may well hesitate before giving expression to his views referring to this subject before minds that regard with distrust every new method of treatment. However, I shall not propose any absolutely new or original plan of practice, and will only recommend that which will

appeal directly to the confidence of the practical mind and has proved quite satisfactory in my own and others' experience. In the treatment of this affection, as in all other gynecological undertakings, it is well to carry conspicuously in our minds this rule, Never attempt a manipulation without a well-defined reason for so doing. Unfortunately the profession is full of specialists who follow stereotyped methods, and who seldom pause to question the wherefore of these formulated theories, but simply adopt them because they are in vogue; these imitators are followers of those who are not unfrequently positivists—men who, simply because *they* have succeeded in the pursuance of a certain form in the management of their cases, present it as the *ne plus ultra* in all similar cases, while, on the other hand, should non-success attend the application of other means they peremptorily and persistently condemn them, whereas it may have been through personal defect or mismanagement that the experiment proved a failure. Let us, therefore, proceed with our pathology in the most catholic and unbiassed spirit possible.

We should regard the uterus simply as a member of the body highly organized, entitled to an equal consideration and amenable to the same laws that influence other organs. Given an inflamed, painful joint, how would we deal with it? Would we not treat it gently, placing it at rest, shower it with warm and cold water, soothing it until the inflammation

and pain had subsided, after which we would consider its further management? How would we regard a surgeon who would attack such a condition with rough measures? Nevertheless, that is just what we too frequently witness in gynecic surgery. How often we have seen the uterotome applied to sensitive, inflamed uteri, or an uncouth, arbitrary appliance crowded into the vagina and made to press against the diseased uterus, there to remain, when the parts are so sensitive from hyperæmia as to render even a digital examination decidedly painful. And these patients would be dismissed without one word of advice concerning their personal habits or manner of living. If the physician belongs in the rank and file of the "regulars," he regards his duty fulfilled with the local manipulation, an inquiry into the state of the bowels, followed with the prescription, "Magnesiæ sulphas;" "Oleum ricini," or "Jalapa." Q. S. Secundem artem. Should he be of the Hahnemann type, a long list of symptoms may be elicited, the majority of them utterly meaningless as applied, which he twists around a selected drug, when he considers his duty performed. The patient in both instances departs none the wiser, and is frequently made worse by the interview.

Does any one question the faithfulness of this portrayal? Then let him attend hospital clinics in this or foreign countries, and he will learn that these words do not reach the limits of this farce. No wonder that these unfortunates seldom find a favor-

able termination, but drift from one physician to another, learning to doubt all, but still clinging to the forlorn hope of eventually gaining some relief.

What, then, is our first step in the present contingency? It is to be kindly candid toward our patient, informing her of the nature of her disease, so far as is consistent with her self-preservation and her intelligent coöperation. She must be made to comprehend how much more depends upon her individual efforts in the faithful observance of nature's laws, than is to be obtained from the physician's art. Having instructed our patient regarding the necessary physiological laws and enlisted her hearty cooperation in the practice of those hygienic principles which we have before discussed, we are prepared to turn our attention to the correction of local deformities.

Should there be found an irritable hyperæmic condition, we will, by appropriate amount of rest and the use of the vaginal douche (as before described), seek to allay the inflammation.

The alternate hot and cold douche, except in very delicate subjects, has always a remarkably salutary effect in establishing a tonic constringency of the capillaries and imparting tone to the degenerated tissues.

There may exist a state of chronic stasis of the uterus which will require the following treatment: After the use of the douche, paint the cervix and os with Churchill's tincture of iodine; after which,

place against the cervix a pledget of cotton, of appropriate size, saturated with glycerine. This is allowed to remain from twelve to twenty-four hours, during which time it will produce a free discharge of serum, with a proportionate disgorgement of the parts. It is then removed by the cord which has been previously attached to it for the use of the patient, and the douche resumed. This procedure should be repeated in a few days. In this manner the inflammation and hyperplasia of the parts soon disappear, and with them the preternatural sensitiveness.

How shall we deal with the flexure; for there it exists—the unconquered cause of all our difficulty. Shall we attempt to right the deformity by a vaginal pessary? That, we shall find, only causes further complications, without in the least straightening the crooked uterus.

It is an absurdly impracticable doctrine to teach that a pessary, which can only be made to press against one or the other surface of the vaginal portion of the uterine cervix, will rectify a flexure which exists at or above the point of pressure. Such an appliance may crowd the uterus upward and deviate it somewhat; but its action is reprehensible, inasmuch as, by its pressure against the sensitive atrophied uterine wall, it tends to aggravate the very condition which we are seeking to relieve, as we shall presently show. Besides, as we have heretofore observed, a vaginal pessary, when worn con-

stantly, invariably produces atrophy and weakening of the vaginal walls—a most objectionable feature.

Let us present for illustration a typical, every-day case—a uterus retroflexed, with the broad ligaments necessarily twisted upon themselves, and impeded circulation. The uterine walls have assumed textural metamorphosis. The flexure is the seat of interstitial deposit and degeneration. The impeded circulation has developed hyperplasia of the uterus and adnexa. Each molimen is a period of torture, and the intervening time is full of discomforts. The patient presents the characteristics of premature marasmus, for her life is burdened with the hours of constant suffering.

All this is produced by the distortion of an organ, the righting of which frequently defies the combined art of the medical world. Introduce your best-adjusted, retroflexion, vaginal pessary, and what do you accomplish? The uterus saddles itself upon the distal extremity of the pessary, and continues to bend and take on further change, with reinforced irritation and further development of the areolar hyperplasia (see Fig. 6). This, with the mischief done to other parts, is absolutely all that is accomplished. Try the cup pessary and, were it possible to adjust it so as to receive the os uteri, what do we achieve? Simply the pushing upward and backward of the uterus, with an increase of the flexure and a bruising of the cervix (a most unfortunate complication), together with the direction of the

patient's mind to her trouble through the annoyance the presence of these pessaries always creates. This we achieve—nothing more.

I appeal to any unprejudiced practitioner if this is not a truthful delineation. On every hand physicians can produce scores of patients who, month after month, year after year, have been plied with these vaginal abominations, and with the miserable result of being in an infinitely worse condition to-day than when they first sought relief; while there is not a physician who can exhibit a single positive cure of uterine flexion by the employment of vaginal appliances. We challenge the medical world to *cure* a uterine flexion of six months' standing by the use of any form of vaginal pessary. Now what is to be done? We have made no progress thus far. Shall we abandon the patient to her helpless state of wretchedness? A thousand times better so than to persist in mischievous vaginal manipulations. There is only one thing left for us to do, and that is what naturally presents itself as the only practicable procedure at the outset. There is but one way in which we can straighten the flexure, and that is by the introduction within the cavity of the uterus of a splint. If we can adjust such an instrument and induce the uterus to tolerate it for a sufficient length of time to give the deformed tissues an opportunity to become adjusted to another position, we may hope to cure the abnormity.

I am perfectly aware that I am encroaching upon

forbidden ground in advocating that upon which has fallen the condemnation of certain high authorities. I am also conscious of the fact that eminent men are not always devoid of strong and unwarranted prejudices. This subject of intra-uterine appliances is one to which I have assiduously devoted my practical investigation for some years, and that which I present in this paper are conclusions which I can conscientiously recommend to painstaking practical physicians. It is absolutely impossible to represent in words the manifold indications and contraindications for the use of the intra-uterine stem pessary. I question if any other gynecic procedure has been more clumsily and indiscreetly employed, hence the odium attached to it. Indeed, we can but acknowledge the justice of this condemnation when we study these infernal intra-uterine inventions which have been advocated, and are still manufactured and commonly employed. Right properly have they been designated "the inventions of the Devil." When we reflect upon the indiscrimination, unskilfulness, and yet presumptuous spirit of those physicians in whose hands these atrocious implements are most likely to be found, we are filled with commiseration for the ill-fated victims of their practices. Notwithstanding the unfavorable aspect which the appearance of these uncouth instruments has given this particular manipulation, the adverse opinions formerly held by many respected authorities regarding its merits are being reversed, and an intelligent use

advocated. An elaborate history of this pessary would extend beyond the limits of this paper. Those to whom it would be interesting will find in Dr. Ely van de Warker's article on "The Intra-uterine Stem in Flexions" an interesting and instructive résumé. The earliest record we have of the employment of the intra-uterine stem is that of Dr. Henry Van Roonhuyse, who practised some time about the middle of the seventeenth century. He was in the habit of first dilating the cervix with gentian root or laminaria, and then inserting a hollow ivory plug in the form of a screw, and, strange to relate, reported good results. From that period to the present the development of this appliance has been marked by inventions as varied as numerous.

An individual consideration of this array would be highly interesting to some, but would unnecessarily prolong our reading. Viewed in the light of physiological anatomy, the majority of these instruments are only to be seen to be condemned, as it would be difficult to conceive their use unattended by unpleasant and dangerous results. Nevertheless, we must believe that even these crude measures proved quite satisfactory, as we have no reason to doubt the veracity of their advocates. In the list of those who have espoused this method of flexion treatment are the names of those world-renowned authorities (than whom it would be difficult to marshal a more brilliant array) who have emphatically expressed themselves in favor of this procedure.

Prominent among these advocates stand Drs. Savage, Simpson, Meadows, Aveling, Atthill, Routh, Barnes, Chambers, Williams, Godson, Tait, and Bantock, of Great Britain, while Drs. Peaslee, Goodell, Smith, Chadwick, and Noeggerath head the list in our own country. To attempt a synopsis of the methods, opinions, appliances, and successes of these learned men which we find recorded would be of itself a lengthy production. The nature of these records, coupled with the imperfect means employed, and viewed from the standpoint of their reliability, are highly significant. Dr. Savage at one time reported over forty consecutive successes, unattended by any unpleasant symptom. Aveling and others of lesser renown report still higher figures. Surely if such results have followed the employment of appliances manifestly crude and imperfect, what may we not hope to achieve from means more delicate and philosophical in their construction? That there is an undefined aversion to this plan of treatment existing in the minds of the majority of intelligent physicians we do not attempt to deny, but is this not really an echo of that note of alarm sounded by a few? If these opponents feel themselves justified in making such sweeping denunciations, they nevertheless advocate similar and equally questionable measures, which are even more pregnant with dangers. We acknowledge that this appliance is by no means intended for general adoption, for, in the successful manipulation of every delicate and effective restora-

tive measure, intelligence and skilfulness are absolute necessities.

It is to be regretted that these essentials are not always dominant characteristics in members of our profession.

That a properly constructed intra-uterine stem, correctly managed, is comparatively safe, and is an efficient means in the gaining of ends which can be compassed by no other method, we are prepared to demonstrate. On the other hand, we predict its utter confusion when associated with presumptuous ignorance and carelessness. We may have been guilty of repetition regarding this sentiment, but it is a vital feature which we would present so forcibly as to be reiterated in the mind of every physician who assumes the responsibility of treating distorted uteri.

On pages 59 and 61 of my essay on Practical Gynecology previously submitted, will be found diagrams representing the mechanism of the intra-uterine stem which I have invented for the treatment of chronic uterine flexions.

To avoid repetition, I refer for a detailed description of its construction and manner of application to the corresponding portion of the previous essay. When the uterus is readily reduced and the posterior cervical portion is long, the pessary represented in the adjoining diagram is preferable. It is constructed upon the same principle as the previously described pessary, only in this form the band surrounds the

side-bars, which are slightly notched beneath the band to secure its stability. For a long time it has been my study to supply an instrument simple in its construction and easy of manipulation. My chief aim has been to furnish one which would deal kindly in its corrections of the wayward uterus. How far I have been successful in attaining this object, you will judge. By the aid of this invention the uterus is gently straightened, and made to occupy its proper position. Its vibrations are not in the least interrupted, while the omnilateral movements of the uterine body are permitted to the full limits of nature.

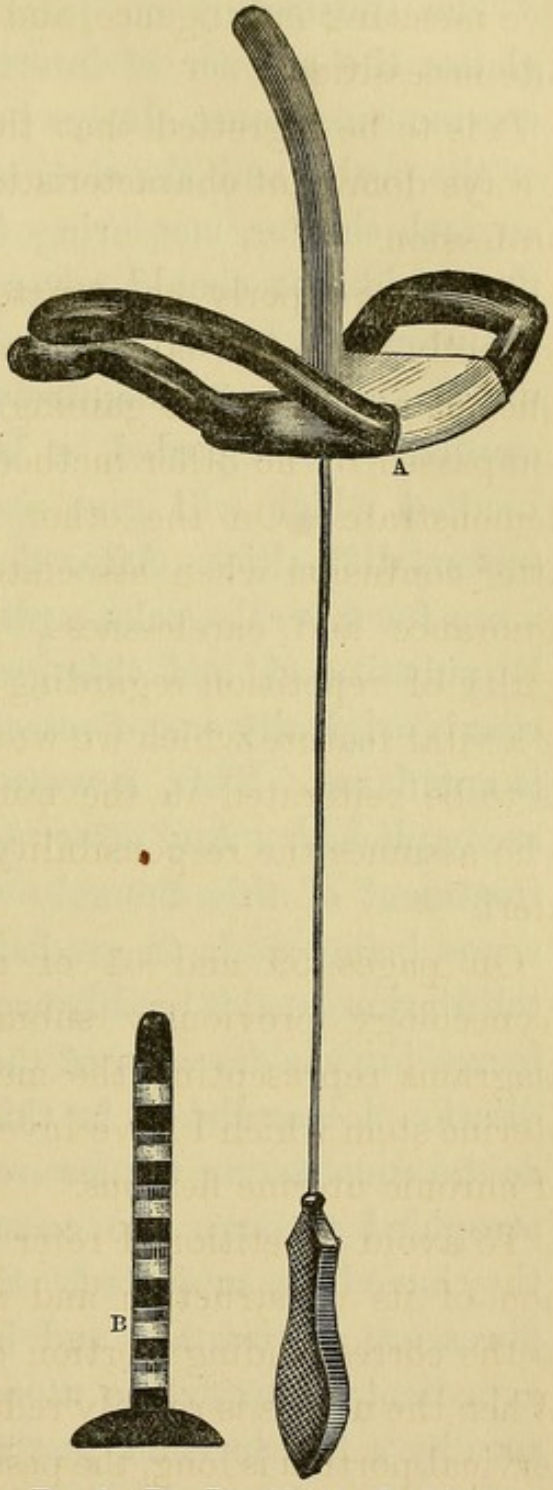

FIG. 9.—Dr. Donaldson's flexible intra-uterine stem-pessary, lateral adjustment of band. This will be found the better form of shield in the use of galvanic stem B.

The illustration on page 61 will explain at a glance the manner of insertion. The depth of the uterine canal must always be ascertained by the use of the probe, and the stem selected be one-fourth of an inch shorter, measuring from the diaphragm of the shield. It should never be inserted until every symptom of tenderness and inflammation of the uterus and adnexa is entirely allayed. If this precaution is disregarded, a latent cellulitis may be kindled which will give rise to tedious and often serious difficulties. After the flexible stem has been worn for several weeks, a plain hard-rubber one may be substituted, and this gradually curved (if the case is originally one of retroflexion) until the uterus is anteflexed. This, however, should be gradually accomplished. Any effort to hasten matters in the treatment of this anomaly will be regretted. The stems being made in graded sizes, the dilatation of the uterine canal is readily accomplished by gradually increasing the diameter of the stems employed. The dilation accomplished in this manner is permanent, as the constricting tissues are not only overcome but atrophied through the constant pressure to which they have been subjected. Sometimes these circular fibres are so resistant and irritable that it will be expedient to apply the uterotome and quiet the tissues by a free incision, just as we would divide the sphincter ani muscles in the treatment of fissure. The forcible dilatation of the uterus after Ellinger's method acts upon similar principles, by rupturing

and stretching the muscular and nerve filaments. For the first few days the stem is retained only a part of the time, perhaps only two or three hours, especially if supra-pubic tenderness or pain is developed. By this precaution we avoid serious complications which otherwise might develop and thwart us in the prolonged wearing of this instrument. When once the womb becomes inured to the presence of the stem it can be worn indefinitely, with necessary precautions.

If the case is one of long standing, it will probably require from six months to a year before the tissues are permanently changed to the normal condition. Rapidity of cure in these cases should never be encouraged, and the patient should be fully enlightened to the difficulties attending the situation before entering upon the treatment. The instrument should be removed as frequently as once a week, for information regarding the progress of the case and condition of the parts, and also for cleanliness. When the instrument is removed it should be thoroughly washed in a five per cent. solution of carbolic acid, or a two per cent. solution of thymol, and the warm vaginal douche freely applied.

When there is marked atony of the parts, or chronic endocervicitis, with subinvolution, the galvanic stem will prove of great benefit, through its energizing effect. The metallic stem may be worn for a fortnight where the parts evince an obstinate indolence, but, as a rule, two or three days will be

sufficient. After a week's interval it may again be substituted for the non-corroding stem. It is not absolutely necessary to remove it during the menses, as it can usually be retained during the period with impunity. Still I regard it a wiser course to remove it as soon as the menses appear, and insist upon a complete rest on the couch throughout the menstrual week. This enforced rest will be found advantageous in many ways, and will greatly further the recovery. We would not wish to be understood as recommending this instrument for the treatment of all forms and conditions of flexions.

Where there exist recent or extensive adhesions, or where there are unmistakable signs of cellulitis, it would be an evidence of ignorance to disturb such by any mechanical measures whatever.

Where there is any doubt regarding this point, it will be well to institute our intra-uterine treatment very cautiously, and note carefully the effect.

For the acquirement of this information it will frequently be found necessary to dilate the cervical canal by the use of a tent before the stem is inserted. For this purpose nothing excels the sponge tent. As a great deal depends upon the construction and mode of insertion of this tent, it may not be inappropriate to describe this operation.

Bearing in mind the nature of a sponge (being the skeleton of an animal from which the putrid sarcous matter has been removed), we use especial care in its selection, and choose only the whole fresh

Mediterranean sponge. We select the material and have them made under personal supervision as a precautionary measure. In many of the European hospitals this agent has been discarded completely from the wards and operating-table, lest a bit of sponge be encountered that has previously come in contact with some infectious disease. It is very important that we be sure of the reliability and freshness of the article. A fresh sponge is full of dust and bits of shell. Those that are unbleached are preferable for the reason that the acid used in the bleaching process destroys the resiliency of the sponge fibre. Having selected the proper material, we wash it thoroughly, and place it in a five per cent. solution of carbolic acid for twelve hours. We then proceed to cut it into proper sized pieces, which for the present use should be about the size of an ordinary finger. The tents we obtain in the shops are usually tapering or conical, a serious defect. Our objective point in the dilation is the *internal* os. We therefore make the sponge of equal diameter for one inch and a half, and then taper it for half to three-fourths of an inch. After impaling our trimmed piece of sponge upon a steel stylet curved slightly, we dust into the pores ten grains of salicylic acid, and proceed to wind it firmly and evenly with a fishing-cord. When the tent is thoroughly dried, remove the twine, and if due care has been taken in winding, the surface will be evenly roughened. The prescribed method of sand-papering the sponge until it

is smooth seems to me a mistake, as a tent so treated does not present an even surface when dilated. I am in the habit of preparing the surface in the following manner. After tying a silk thread around the stylet end for future use, I take a bit of pure beeswax, and melting it slightly over a spirit flame, smear the surface of the tent thoroughly, after which, by the aid of some polished substance and a trifle of vaseline, the surface is rendered exceedingly smooth. We have in this way secured a tent thoroughly antiseptic, and one which we can introduce deliberately and without the aid of a speculum.

The ordinary sponge tent is very apt to defeat us by its rapid absorption of the secretions; so that if we make an unsuccessful attempt, the sponge is so roughened that we must select a fresh one. Besides protecting the sponge from moisture, it renders it easy of introduction, and does not abrade the delicate membrane, during insertion or withdrawal. It is introduced in this manner: Place the tent upon a slide stylet, prick a few pinholes through the waxed surface, and clip a bit of the point so as to admit the moisture to the sponge. Then, with the patient on the left side, guide the point of the sponge to the os with the index-finger, and push it well into the canal, leaving about one-fourth of an inch protruding from the os; retain it there for a few minutes to make sure of its fixation. This sponge tent should be allowed to remain from forty-

eight to seventy-two hours, which it can safely do, owing to the antiseptic manner of its preparation. If removed in a few hours, as advised in the books, the dilatation is incomplete, and the sponge is so firmly impacted within the canal that the delicate tissues are torn. The sponge is not a rigid, forcible dilating substance, and requires a much longer time in which to complete its work than the tupelo tent. If allowed to remain two days, it will be found to have fully accomplished its work, and can be withdrawn with ease. It is removed by the aid of the silk thread, first placing the index-finger of the right hand firmly against the side of the os. After its removal the warm vaginal douche of two per cent. solution of carbolic acid should be employed. It is an important point to remove the tent without the aid of the speculum, as several instances of ill effects from the admission of air within the uterine cavity under these circumstances have been reported. The benefits derived from the use of the sponge tent are not simply dilation. It acts admirably in reducing the hyperplasia of the uterine tissues. It also aids greatly in straightening the canal, and renders the uterus more tolerant of the presence of the stem. After the removal of the sponge, the womb should be allowed to rest a day or two before the insertion of the stem.

We might continue almost indefinitely to make suggestions regarding the management of these surpassingly troublesome cases, but there is danger of

confusion arising from too great amplification. It is apparent that much must be left to the discretion of the physician, and those who do not possess discrimination and common sense in a large degree should be in some manner debarred from meddling with these patients. It would be a source of considerable regret if in this paper I have seemed to attach undue importance to any form of local treatment. While I regard mechanical interferences as indispensable, I wish to be clearly understood as classing them as accessories to the wider and more comprehensive laws that govern general health. Would that some overruling power might strengthen the minds of specialists against the prevailing tendency to peer through a magnifying glass (so to speak) at every local defect, expending their energies in discussing its minutest phases, and becoming absorbed in the consideration of local symptomatology and local therapeutics.

When gynecologists treat uterine disorders as simply so many expressions of constitutional derangement, then and then only shall we see our specialty truly advance. It will be noticed that I have omitted to include in this paper the discussion of ovarian dysmenorrhœa.

As I have already gone much beyond my intended limits, I have reserved this topic as the theme of a future essay. You will also observe that I have neglected to discuss drug administration. I have neither the courage nor desire to enter into a con-

sideration of this form of treatment. Medicines in the treatment of dysmenorrhœa have often played me false. I've pursued their boasted truth over and over again, only to find them illusions at last. There is one which I would not feel justified in passing without special mention, and that is opium. Sooner or later these patients become addicted to the use of this or some other narcotic to help them endure their sufferings.

Often this wrong lies at the door of the physician who has presented to his patient this Dead Sea apple. It is the duty of each physician to protect his clients in every possible way from the use of this drug, for, as surely as night follows day, there is not a single narcotic that will not breed neuralgias, besides rendering its victims irresolute, cowardly, and intractable.

The frequent administration of narcotics in the management of neurotic affections, invariably defeats the very object we wish to accomplish. It is only the extreme pain of incurable affections that renders their repeated or prolonged use justifiable.

INDEX.