Sterility in women : its causes and curative treatment / by J. Beresford Ryley.

STERILITY IN WOMEN

DR. BERESFORD RYLEY

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STERILITY IN WOMEN.

STERILITY IN WOMEN:

ITS CAUSES AND CURATIVE TREATMENT.

BY

J. BERESFORD RYLEY, M.D.

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Member Royal College of Physicians, Edinburgh;
Fellow Medical Society, London;
Fellow British Gynæcological Society, London;
Late Senior Physician Finsbury Hospital for Women,
and formerly one of the Government Examiners for Women
under the Medical Act, 1866, &c. &c.

HENRY RENSHAW,
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1895.

PREFACE.

DOMESTIC happiness, based upon social virtues, is the highest and purest expression of human felicity that the world can know, and wherever it exists, in the cottage or the palace, commands alike the respect and admiration of mankind. It is the initial dream of all hymeneal unions based upon love and esteem, and the richest dowry with which to freight the golden argosy of marriage.

The desire for offspring, Nature's common law, is innate in the human breast, and the love of husband and wife seeks as naturally to evolve itself into the attributes of parenthood as the bud into the beauty of the flower, or the petals of summer into the fruits of autumn.

How many a young career with this fair goal ahead has been wrecked by delusive hopes in this respect, while the lives of

two beings, who had started so pleasantly together on life's journey, have been rendered empty and unsatisfied in consequence.

It is to meet this widespread yearning, and to fill up as far as practicable the blanks in such lives—more numerous than is generally supposed—that this little work has been written. Its subject has occupied my attention for many years; and as I was early placed in a position to study it practically, I am now able to give the results of an unusually extended experience.

In the exposition of my theme I have endeavoured to avoid the use of any word or expression that could wound the susceptibilities of the most sensitive, and where it has been necessary to make my meaning plain outside the range of common conversation I have tried to express it as delicately as possible and by the employment of technical terms, which only convey definite scientific ideas and are not in use colloquially.

J. B. R.

54A WELBECK STREET,
CAVENDISH SQUARE, W.

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STERILITY:

ITS CAUSES AND CURATIVE TREATMENT.

The Impediments to Conception may conveniently be divided into mechanical and physiological. Under the head of the former may be enumerated all those defects in the size and shape, all those alterations in the position of, and obstructions in, the several passages leading to the central organ of generation, which is technically called the **Uterus.**

Under the head of the latter may be placed the several inabilities on the part of this organ and its appendages to properly perform their functions, the chief of which are **Ovulation** and **Menstruation.**

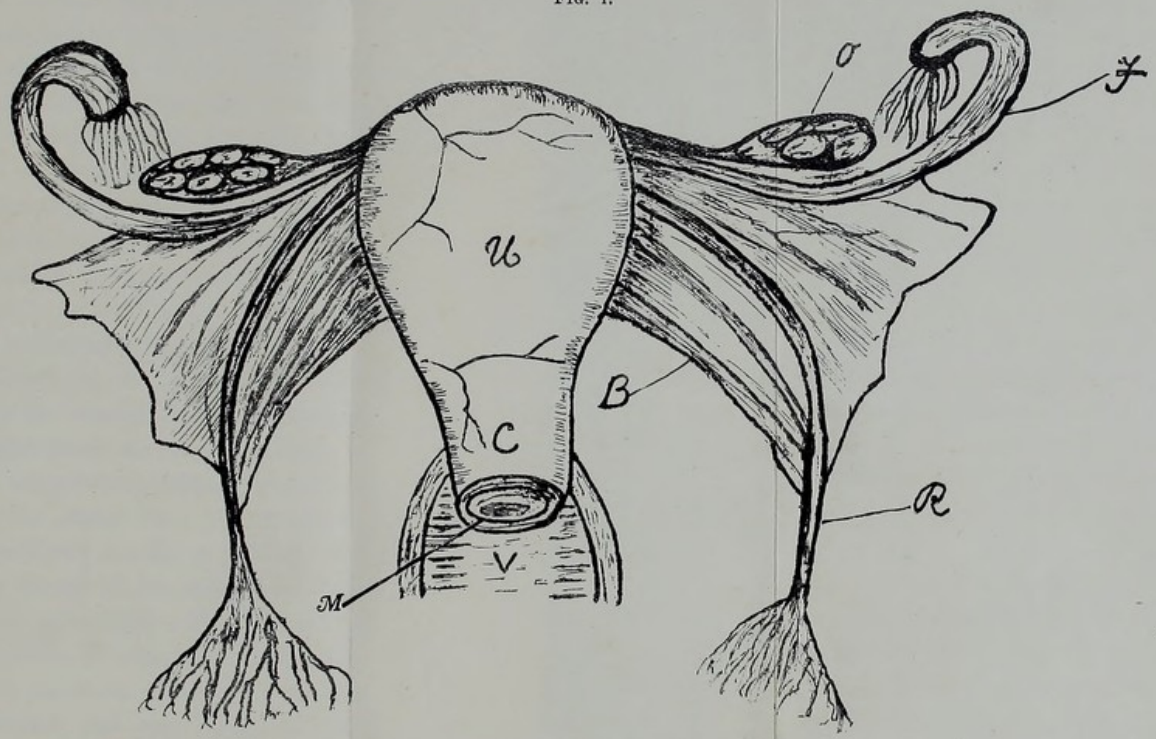
By far the largest proportion of sterile marriages result from the former class of

causes, and the most frequent of all under this head from that more or less constricted state of the canal of the uterus, which is technically known as **Atresia Uteri.**

As it will facilitate the apprehension of this subject to have a rough knowledge of the rudimentary anatomy of the parts concerned therein clearly in the mind, I will briefly describe the principal parts of the sexual apparatus, a diagram of which (Fig. 1) is adjoined, and the special functions they are called upon to fulfil. The uterus U, the centre of this system, may familiarly be compared to a pear-shaped india-rubber bag, about 3 inches in length, and of such solidity as to be only toughly pliable.

Three-fourths of this organ, called the Body, is suspended within the cavity of the pelvis by certain membranous structures termed its ligaments, within which are contained the **Fallopian Tubes** and **Ovaries,** while the remainder, called the Cervix or neck, juts into the upper part of the **Vagina,** and in its normal situation

FIG. 1.



Front View of the Uterus and its Appendages (Natural Size), with a Section of the Fundus of the Vagina, the anterior part of which is removed to show the Cervix Uteri, or Neck, at the extreme end of which is the Os, or Mouth. *U*, Body of Uterus ; *C*, Cervix Uteri ; *M*, Os, or Mouth ; *O*, Left Ovary ; *F*, Left Fallopian Tube *B*, Left Broad Ligament ; *R*, Left Round Ligament.

To face p. 2.

can be felt by the finger introduced into that passage as far as it can go.

At the extreme end of this vaginal portion of the uterus is the **Os** or mouth, which gives admittance to a canal, about the size of a goose-quill, leading to the cavity of that organ, and so on to the Fallopian tubes and ovaries before mentioned. The os uteri in its natural state is sufficiently large to admit the tip of the little finger, but in the condition described as **Atresia Uteri**, it is either altogether occluded or its circumference diminished to any degree from the normal calibre to that which can scarcely admit the head of a pin. In the latter state the malformation is suggestively known as **Pinhole Os.**

Complete closure of the mouth is either acquired or congenital. The former is usually the effect of ulceration, inflammation, or other accident, which seals up the parts concerned, and may occur at any period of life, while the latter, as its name indicates, is always existent from birth. When complete occlusion is present at the

period of puberty, a woman is, of course, unable to menstruate in the usual manner, and the menses, in that case, are either retained within the cavity of the uterus, enlarging it to a degree corresponding to the length of retention, or the system, by an extraordinary effort of nature, relieves itself by a periodic discharge of blood from the nose, mouth, eyes, and even sometimes the ears.

Complete Closure of the Canal of the Uterus from Congenital Causes is of rare occurrence, and is usually associated with such marked and definite symptoms that there should be no difficulty in recognising its existence from the first; but occasionally it escapes attention in a most remarkable manner, and has remained unsuspected for many years.

As an instance of this I may state that some time ago a young lady, twenty-six years of age, living in Devonshire, consulted me for the following unusual symptoms:—Since sixteen years of age she had suffered, at intervals of six to eight weeks,

from an irregular discharge of blood from the nose, mouth, and eyes, accompanied by an intolerable feeling of weight and misery in her head, together with a sensation of extreme distension upon taking the slightest meal.

Her complexion at the time of her visit to me was of a livid and dusky hue, and her face was very congested and swollen. I gathered from her that she had never menstruated, and had taken "gallons of medicine to bring it on" without any effect.

I at once suspected the nature of the case, and a local examination disclosed a complete congenital closure of the mouth of the uterus, and, of course, clearly accounted for all the symptoms from which she had suffered. I pointed out to her the futility of all medicines in a condition of this kind, and recommended her to go at once into a private ward of an hospital for women with which I was then connected, for the purpose of an operation.

She did so; and within a month I had

the satisfaction of finding that she not only menstruated in a perfectly natural manner, but that in a short time the alteration in her appearance and health was so remarkable that it was the subject of comment amongst her friends.

On the other hand,

Constriction of the Mouth or Canal of the Uterus is of very frequent occurrence, and is, I should say, the cause of a large majority of the cases of sterility that are met with in practice. The history and symptoms of this condition are seldom uniform, and sometimes far from correlative with the amount of obstruction present.

As a general rule, the subject of this malformation commences to menstruate with some amount of pain, although there are frequent exceptions to this, which, in a greater or less degree, is seldom or never absent during each subsequent menstrual epoch, and is sometimes of so agonising a nature as to render life almost intolerable, the sufferer scarcely recovering from the

effects of one attack before she is called on to endure another. This symptom is technically called

Dysmenorrhœa, or Painful Menstruation, and is one of the most frequent maladies for which a medical man is called upon for advice. It arises from three principal causes, each of which must be duly considered with relation to treatment—namely, first, stricture of the cervical canal anywhere between the external opening and the Os internum ; secondly, from flexions and versions of the body of the uterus itself; and thirdly, from an abnormally sensitive state of that organ, which is probably due to the results of chronic inflammation past or present.

If the subject of this malady be unmarried, all local interference ought, I need scarcely say, to be avoided as far as practicable, and operative measures only adopted under the most pressing necessity. Fortunately medicinal treatment is able to palliate the sufferings in the majority of cases until after the epoch of marriage,

when a simple operation should be resorted to for its cure.

A very widespread error prevails with respect to the consequences of marriage in cases of this kind. It is a very common notion that this event is the natural cure for all trouble of such a nature, whereas those who understand the question are aware that when the subject of such an abnormality enters upon married life the consequences are generally very disastrous, all the previous evils, the pain, the excessive menstruation, the profuse leucorrhœa, are greatly increased; and to these are superadded the distress and disappointments of **dysparunia*** and sterility.

Under these circumstances a little painless operation, free from any danger, will not only relieve the symptoms described, but place the sufferer in a more favourable position to become a mother.

Dysparunia and painful menstruation, then, as we have seen, are not infrequent

* A somewhat recent term, signifying "painful intercourse."

attendants upon sterile marriage, though, as I have already said, such is not always the case, and are usually the results of constriction of some portion of the uterine canal, which causes chronic congestion of the whole sexual apparatus, and a hindrance to the egress and ingress respectively of the menstrual flow and the seminal fluid.

Should the constriction be of so extreme a degree as to render the introduction of the sound difficult or impossible, this malformation can only be dealt with effectually by means of a surgical operation known as **incision of the cervix.**

The manner in which we are instructed by many of the recognised class-books on gynæcology to perform this operation, is, in my opinion, not only one of the most clumsy proceedings in surgery that could be devised, but in the few cases in which it is successful a distressing lesion is produced, the results of which to the integrity of the parts concerned, and to the subsequent health of the patient, is most disastrous.

Fortunately, however, in nine cases out of ten, Nature comes to the rescue, and quickly heals up the ghastly wounds made by the surgeon, and restores the parts to their pristine condition, even to the extent of the stricture for which the operation was performed.

If the reader will refer to any well-known book on this subject, he will find that a terrible instrument, like a shears with a fang to it, euphemistically called Küchenmeister's scissors (Fig. 2), is recommended for this operation of incision of the cervix, with which the **whole thickness** of the structures is crushed through by main force, leaving two gaping segments which bleed profusely at the time, and are probed for three or four weeks after to prevent them from uniting.

The objections to this mode of operating are obvious. In the first place, there is no necessity whatever to cut through the fibro-elastic sphincter of the cervix, and with Küchenmeister's scissors this cannot be avoided; and where the wound does

not subsequently heal in the manner already stated, ectropion of the mucous membrane of the canal, with all its attendant evils, results, which often demands another operation for its relief; secondly, as atresia uteri is rarely confined to the os tincæ, but extends almost invariably to the os internum, Küchenmeister's scissors are utterly useless for this condition, since the internal cervix cannot be incised by them without deeply wounding the fundus of the vagina and endangering the structures contiguous thereto.

Thirdly, the operation is seldom effective; and, lastly, it is a needlessly painful one, demanding the administration of an anæsthetic during the incision, and causing much suffering by the frequent probings subsequently.*

* A typical example of the evils here enumerated in connection with the use of Küchenmeister's scissors came under my notice in January 1891, when the wife of a medical man, practising in Yorkshire, consulted me with regard to her health. It appears that about ten years previously she had had an operation of the nature

FIG. 2.

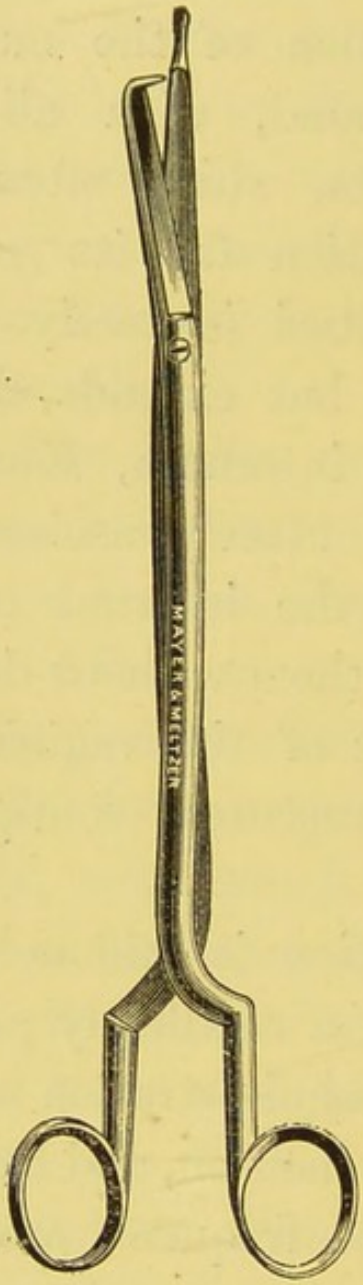
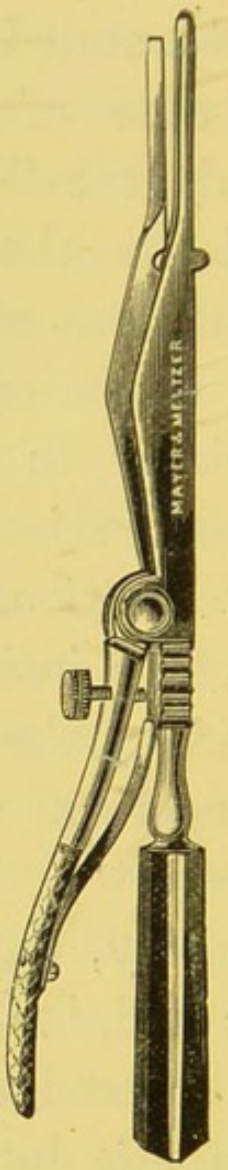


FIG. 3.



indicated performed upon her by a well-known gynæcologist in London for the relief of dysmenorrhœa, which at that time was not severe. Since then, however, she had gradually become worse, until at the time of her visit to me her sufferings, according to her own statement, were really terrible, and her health had quite broken down in consequence. Upon examination, I dis-

All these objections are avoided by my operation, which is performed in the following way:

Having introduced a crescent speculum, an instrument that affords a much wider field for vision and manipulation than any other of that kind, I fix the upper segment of the cervix with a Sims' hook, and, **having rendered the mucous membrane of the canal anæsthetic by means of cocaine**, pass a single-bladed metrotome (Fig. 3), such as my old and revered tutor, the late Professor Sir James Y. Simpson, of Edinburgh, used, through the os tincæ as far as the internal cervix, and make an incision about an inch long, on either side through **the mucous, sub-mucous, and first layer of connective tissues only.**

Should the stricture be too tight to

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covered a glaring instance of the mutilation often left after operation by Küchenmeister's scissors, together with an *almost complete stenosis of the uterine canal* following thereon. I had to submit my patient to two separate operations before I could restore the patency of the canal, the integrity of the cervix, or relieve the symptoms from which she suffered.

easily admit the metrotome, the canal must be previously dilated to the required calibre by means of Hagar's dilators.

The hæmorrhage is generally insignificant, and can always be restrained by the pressure of a sponge on the bleeding parts, while the uterus is fixed by a Sims' hook or vulsellum forceps.

As soon as all oozing has ceased the new canal must be packed with a thin strip of lint soaked in carbolic oil, to which a silk thread is attached for easy withdrawal, and this dressing changed daily for six or seven days until granulation is duly established.

I then place an intra-uterine stem, or cervix dilator, as the case may require, and after a few days' rest to favour healing, the process is complete and all further interference, with the exception of removing the stem subsequently, is unnecessary.

In this manner all pain is absolutely avoided, **the canal rendered permanently patent, the integrity of the cervix left unaffected,** and the period of treatment

curtailed by more than half the time occupied by the old operation.

The dysmenorrhœa generally associated with constriction of the uterine canal is almost invariably cured by the surgical proceedings just described.

Should incision, however, fail to give relief, **Electrolysis,** applied locally, will almost certainly succeed in doing so. This is best done in the following manner :

The negative electrode, properly shielded and of a suitable shape, of a galvanic battery is passed into the uterus just like a uterine sound, and to a vulsellum forceps, gently grasping the cervix, the positive pole is approached, and the current passed through it.

The strength of this should be regulated to the susceptibilities of the patient, and gently graduated till the maximum degree is reached. Each application should occupy from ten to fifteen minutes, and be repeated bi-weekly or bi-monthly, according to the requirements of each case.

There seems to be a general impression

that **Electrolysis** should be applied to the fundus alone; but I have never hesitated, in my numerous cases, to submit the whole cavity of the uterus to its action, and have not found any untoward results follow therefrom.

I have known this proceeding relieve the worst cases of dysmenorrhœa where incision of the cervix and stem pessaries had altogether failed to do so.

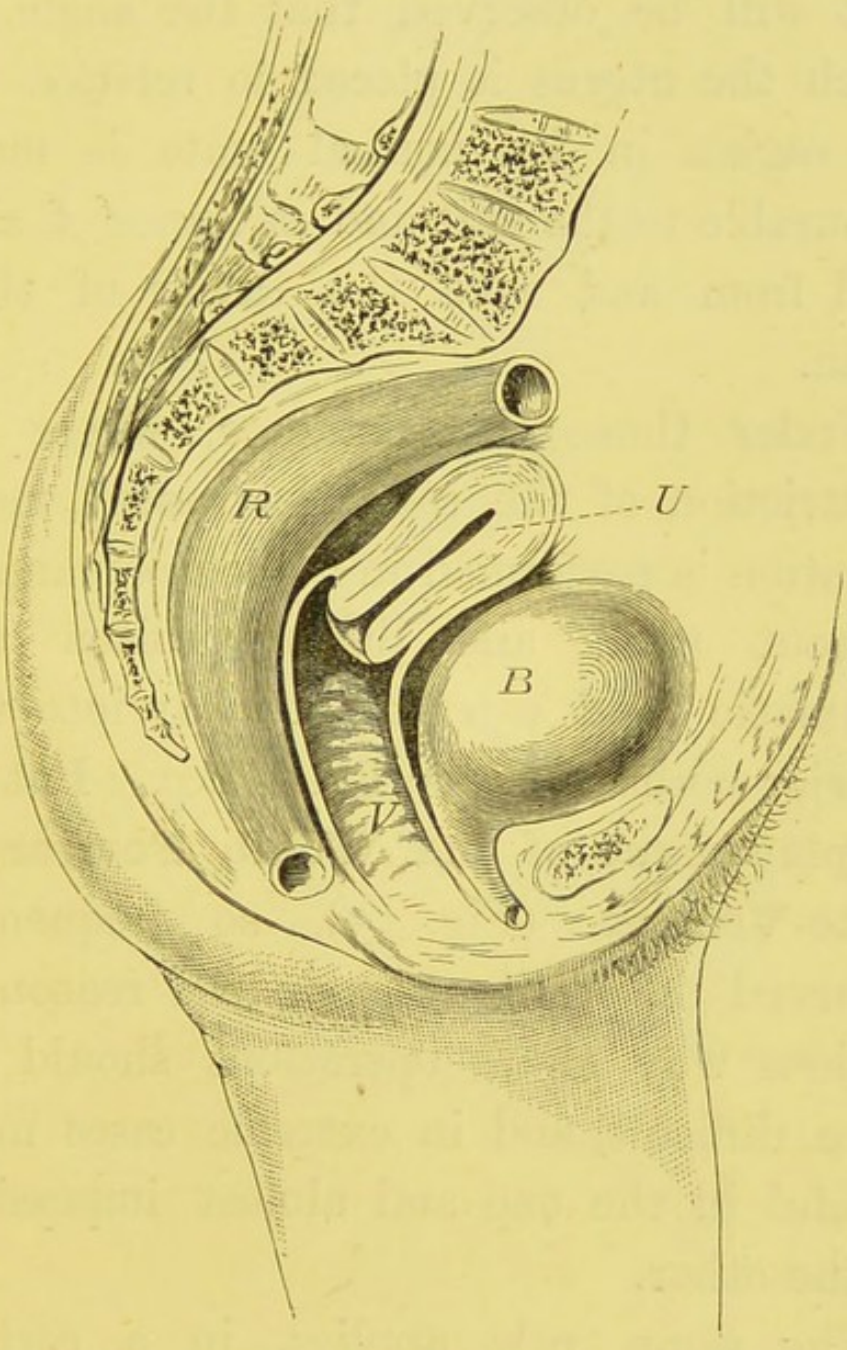
Before proceeding to discuss the various causes of sterility, it will be well to consider the normal aspect of the generative system and the relations of its several parts to each other. It is only under such circumstances that any deviation in size, shape, or position, and the subjective symptoms connected therewith, can be duly detected and properly appraised.

If the diagram No. 4 is examined it will be observed that the axis of the uterine canal forms an obtuse angle with that of the vagina anteriorly.

Any deviation from this direction, either towards the bladder or the rectum, consti-

tutes a corresponding degree of the dis-

FIG. 4.



U. Uterus; *B.* Bladder; *R.* Rectum.

placements technically known as ante-version and retro-version, and as these play

a very important part in sterility, it will be necessary to discuss them at some length.

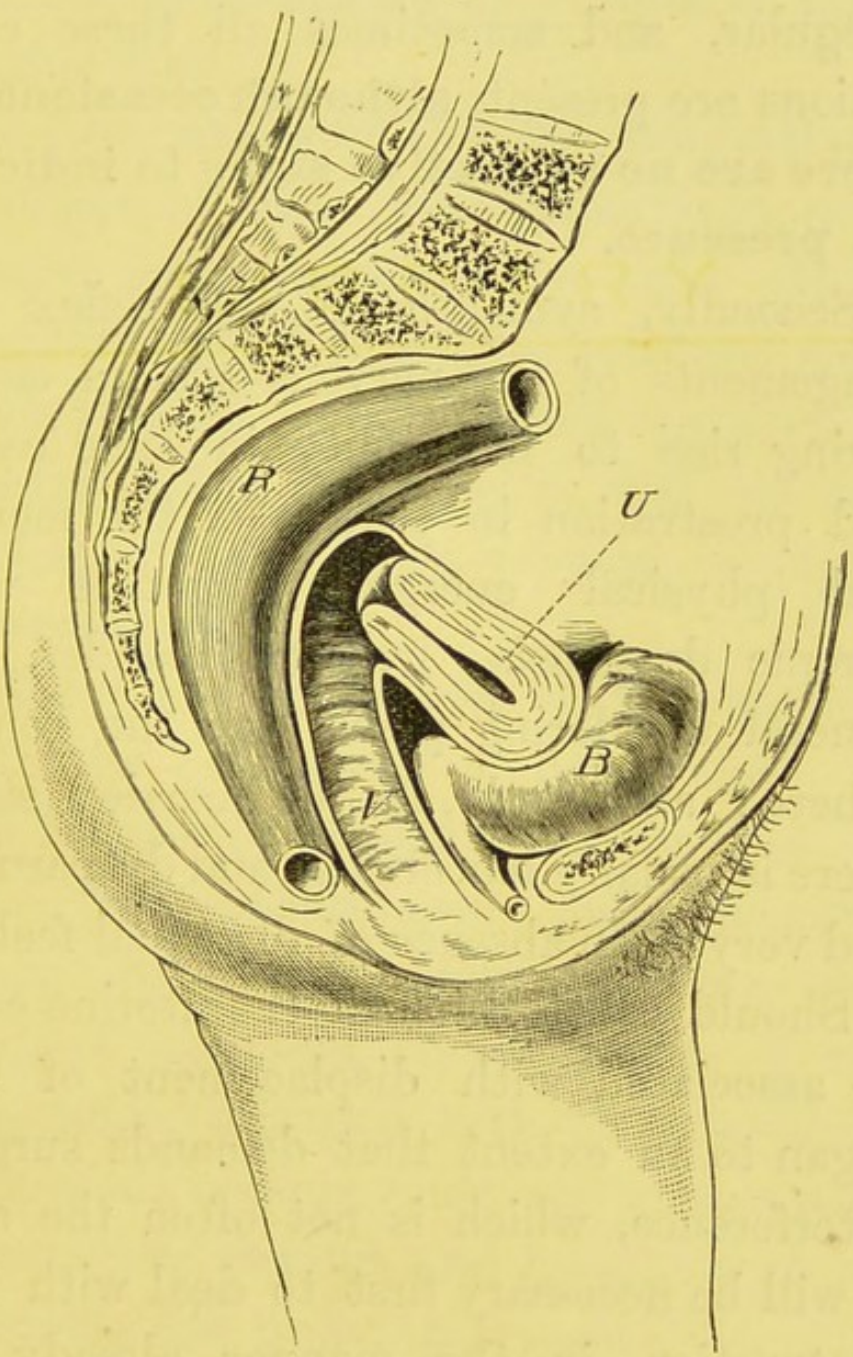
It will be observed that the angle at which the uterus is placed in relation to the vagina in its normal state is most favourable to the exit and entrance of any fluid from and into the cavity of that organ.

Under these circumstances, where no constriction of the canal is present, menstruation is performed in a natural manner, without pain, and during coitus the spermatic fluid can find its way into the interior without let or hindrance. But in **Displacement of the Womb Forwards, Ante-Version** (Fig. 5), so frequently observed in sterile women, the reason is obvious why these operations should be more difficult, and in extreme cases most painful in the one and almost impossible in the other.

The same rule applies, in a certain measure, to the displacement backward, or retroversion; but this form of malposition is not so frequent a cause of sterility as the

other, and is much more amenable to easy and immediate treatment.

FIG. 5.



Women suffering from displacement forwards are very often the subjects of a

series of most distressing symptoms. In the first place, menstruation is not infrequently either painful, profuse, or irregular, and sometimes all these conditions are present, **although occasionally there are no subjective signs to indicate its presence.**

Secondly, sympathetic and reflex derangements of the nervous system occur, giving rise to irritability in some cases, and prostration in others, of the mental and physical energies, together with chronic dyspepsia, irritable bladder, and general wandering pains over the genital sphere; and lastly, in the married state, there is usually leucorrhœa and dysparunia, and very often absence of all sexual feeling.

Should constriction of the uterine canal be associated with displacement of that organ to an extent that demands surgical interference, which is not often the case, it will be necessary first to deal with that obstruction in the manner already described before attempting to reduce the other condition.

Where this proceeding, however, is not required, the ante-verted uterus is best dealt with by a free dilatation of its cavity and the introduction of a suitable intra-uterine stem.

The best means of Uterine Dilatation is a subject of such great importance as to deserve special consideration here. It is a surgical proceeding in such constant requisition that the method which combines the greatest safety and rapidity with the least pain should, one would suppose, be that in universal use.

But there is far from being unanimity as to the best means of doing this. We still frequently see employed for this purpose the old-fashioned and dangerous sponge tents, and many still use those made of laminaria, or sea-tangle. I have long since discarded both these means of dilatation, because they are unnecessarily tedious and painful, and fraught with considerable risk from septicæmia.

I now exclusively employ Hegar's graduated dilators, which effect their object

in a twentieth of the time occupied by those mentioned, and with proper care there is no danger whatever in their use.

These instruments are graduated from the smallest, No. 1, to the largest size, No. 25, but it is seldom necessary to go beyond No. 8 in order to easily introduce an intra-uterine stem.

After this proceeding the patient should be kept warm in bed for three or four days, the temperature watched with care, and treatment adopted accordingly. It is seldom, however, that any trouble arises in connection therewith, and the ultimate result upon the patient's health, in the majority of cases, is most satisfactory, and often remarkably so, all the distressing symptoms enumerated in connection with the ante-version ameliorating by degrees and ultimately disappearing altogether.

How long the intra-uterine stem is to remain *in situ* must depend on its individual effects; many of my patients, having found very marked benefit from its presence, have written for sanction to retain

it, and have done so for long after the three or four months I enjoin for its use. When hypertrophy and menorrhagia are associated with the displacement, an intra-uterine stem is often very intolerable to the uterus; and its introduction, under these circumstances, should, therefore, be either altogether avoided or its effects watched with extra care. In all diseases of the appendages both dilatation and the stem are usually contra-indicated.

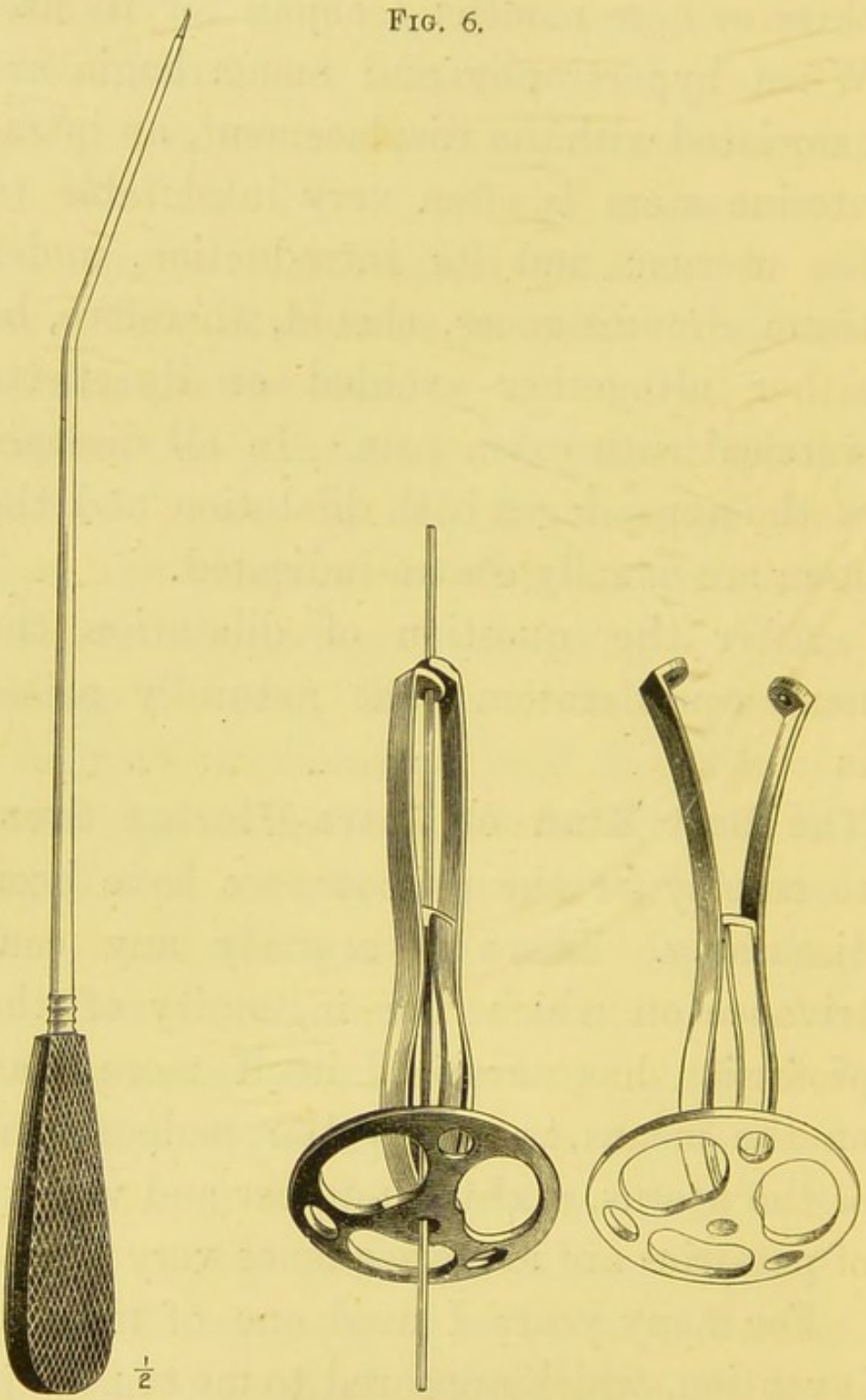
After the question of dilatation the next consideration that naturally arises is

The Best Kind of Intra-Uterine Stem to employ for the purposes we have been discussing. There is scarcely any contrivance on which the ingenuity of the profession has exercised itself more than on the means to rectify the malpositions of the uterus, and the number and variety of pessaries are in consequence very great.

For many years I used one of my own invention, which appeared to me to possess some advantages over those then in vogue.

But about five years ago I saw, in an

Fig. 6.



American journal, the diagram of an intra-

uterine stem by Dr. Ouderbridge which appeared to me so ingenious that I got Krohne and Sesemann, of Duke Street, Manchester Square, to make me some like it, with the view of trying its effects. But my experience in that respect, extending over some eighteen cases, was most unsatisfactory, and in two quite disastrous; the silver wire of which they are made, having always shown a tendency to bury itself in the surrounding textures, became, in these two instances, so incorporated with the uterus as to render its removal most difficult and distressing. I have now reverted to the instrument which I used previously, a diagram of which is adjoined (Fig. 6), and which is a modification of Greenhall's.

The Displacement of the Womb Backwards, or Retro-Version, is easily dealt with by means of a Hodge's pessary, and if no constriction of the canal is present, this simple contrivance will often be sufficient to retrieve the persistent backache, bearing down, and

sterility often associated with this condition.

Its introduction, however, is not quite such a simple matter as it appears, for it requires practice and care to turn the womb without injury and afterwards fit the instrument in an exact position behind it. I have many times known more harm done than good by an inefficient application in cases such as these.

The Lateral Displacements of the Womb, being either the results of pelvic inflammation or pelvic tumour of some sort, have no practical bearing, save under exceptional circumstances, upon the question of sterility, and need not, therefore, be discussed here at any length.

Some practitioners profess to be able to disperse many of the products of inflammation within the pelvis by means of local "massage," employed per vaginam; but as this appears to me to be a most indelicate proceeding, and necessarily very uncertain in its results, I have never practised it, and cannot therefore express any opinion upon the matter.

Another very common cause of sterility is **Uterine Leucorrhœa, or Catarrh,** popularly known as "the whites," and is a symptom of either a general bad state of health or of some local irritation or inflammation of the generative system itself.

Young women who have not menstruated properly, who are pale and feeble, and have lived much in large cities or under conditions unfavourable to health, often suffer from this complaint, which ultimately brings on a series of other symptoms, such as loss of appetite, dyspepsia, palpitation, shortness of breath, and extreme constipation, the sum of which go to make up that general enervation of the mental and physical powers which is so frequently associated with it.

Leucorrhœa may also occur in young married women, from the effects of miscarriage setting up irritation or inflammation within the cavity of the womb, and leading to those slow changes in the nutrition of the parts that ultimately interfere with their functions.

There is another factor in the production of sterility under the conditions described which it is important to bear in mind—namely, **the mechanical impediment** produced by the thick, tenacious, and jelly-like fluid that blocks up the cavity of the womb, and prevents the fertilising elements from entering therein during marital intercourse.

It is extraordinary what a large quantity of this jelly-like matter may be secreted daily, and pass out of the body while the subject of it is sometimes unconscious of its existence.

Should she be aware of her condition, and consult her local medical attendant, it is more than probable that he will prescribe the usual injections of alum, lead, or zinc, which she may use for months or years, as the case may be, without any benefit whatever, for the reason that they cannot reach the seat of the disease, which demands for its cure the introduction **into the womb itself** of astringent remedies through the medium of a special apparatus

requiring much practice and skill in its use.

The subjects of leucorrhœa, however, are, as a general rule, but too painfully conscious of its presence, and often describe the effects of this discharge as "draining their life and energies away."

The languor and nervous prostration that in some instances are consequent upon or associated with this symptom quite unfit the sufferer for the ordinary duties of life, and she often becomes a chronic invalid, a misery to herself and a vexatious anxiety to her husband and friends.

Under these circumstances active intra-uterine treatment is imperative, and should be adopted without delay.

Another frequent factor in the production of sterility is

Ulceration or Granular Degeneration of the Cervix Uteri, a lesion that usually commences by a slight redness of, or abrasion at the neck of the womb, and, eating away insidiously, ultimately produces a large, jagged, angry ulcer, which

discharges a quantity of yellow matter, sometimes tinged with blood and occasionally very offensive.

This redness or abrasion, instead of proceeding to ulceration, sometimes goes on to a slow form of hardening and enlargement, during the course of which there are frequent outbursts of inflammation in and around the structures of the womb, which fixes it immovably to the surrounding parts and unfits it for the efficient performance of its various functions.

These conditions are very apt to arise in delicate women after marriage, from very slight causes, and as the initial stage, as has been seen, is usually very gradual and insidious, it can easily be understood how important it is that they should be recognised and treated as soon as possible.

One of the earliest symptoms of such invasion of the uterus is pain in the back and sides, one or both, just above the groins, together with a slight uterine discharge.

Then, next in order, usually supervene

excessive menstruation, dyspepsia, muscular atrophy, and at last a condition of physical and nervous prostration which quite unfits the sufferer for the purposes of marriage and the cares and duties of a household.

This slow and almost imperceptible degradation of health is a most deplorable comment either upon the carelessness of the patient, who has failed to seek advice early enough, or the neglect of her medical attendant, who has misunderstood the significance of the symptoms or failed to suggest the necessity for further advice; thus the happiness of a fair young life is often sacrificed unnecessarily, and the beauty and brightness of a face, the lustre of the eyes, and the contour of a form that was the pride and delight of her husband, are allowed to lapse into premature old age and become wasted and unlovely.

In the early stage ulceration of the uterus is very amenable to treatment; but when the bodily powers have broken down under the depressing influences of chronic

irritation or the drain of a copious discharge, it is often very obstinate, and frequently demands the employment of measures much beyond those in common use.

I have lately employed thermo-cautery in some bad cases with very striking success, and have been able thus to burn away the angry and cancer-like growth of years in a very short time.

There is no danger, and but little pain, in the application ; but, of course, it must be employed with care, and only by those who are familiar with its use.

The redness and abrasion, which constitute the initial stage of ulceration, often proceed to a very remarkable process of formative activity, known by the term **Hyperplasia, or Hypertrophic Induration of the Uterus.**—This condition is very prone to arise upon miscarriage, and is not unfrequently the result of obstruction due to atresia uteri or ante-version.

Miscarriage during the first six or twelve months of marriage is much more frequent

than is supposed, and very much more serious than it is usually regarded.

When hyperplasia arises from this cause it is principally due to sub-involution of the womb in the first instance, or to the retention of some of the constituents of the abortion, giving rise to chronic inflammation and hypertrophy.

Upon examination, the uterus is, of course, found to be considerably enlarged and indurated, and sometimes immovably fixed by the products of pelvic inflammation.

If the **Fallopian tubes** or **ovaries** are not involved, and there is no evidence of there having been any **pelvic inflammation** in conjunction with the hyperplasia, this condition is best treated by free dilatation of the uterine cavity and the internal administration of such uterine stimulants as hamamelis, or ergot of rye, or both together.

Electrolysis is said to be very successful in the reduction of this hypertrophic state of the uterus, but though I have frequently applied it for that purpose,

I cannot say that I have ever effected this object to any satisfactory degree.

Another symptom which is not unfrequently observed in sterile women is **Scanty Menstruation.** — This points to the conclusion that the genetic forces of the organs are at fault and their functions in abeyance for some reason. Some women, as is well known, menstruate much more freely than others; but before deciding whether a certain quantity is too little or too much, it is necessary to ascertain what amount is normal in each.

I am not now concerned with that frequent suspension of the menstrual function that is so common in girls between fifteen and eighteen years of age, and which constitutes that disease known as **Chlorosis,** or "green sickness." I wish only to deal here with that particular form of scanty menstruation which is sometimes found in married women, and which is due to altogether different causes.

In this condition there is no malformation of the womb, nor any evidence of dis-

ease affecting it, but the menstruation is irregular, usually painless, and seldom lasts more than a day or two.

Women with these symptoms are often inclined to be stout, have flushed and congested complexions, generally suffer from indigestion, and are usually deficient in sexual feeling. They not unfrequently have a marked objection to active exercise, are prone to be moody and apathetic, and **dysparunia** is often a prominent symptom.

Suitable medicine will sometimes relieve a condition like this, but in many cases it is quite futile, and then I have found the **local application of galvanism,** together with the introduction of a metal intra-uterine stem, produce the most striking results, both agents appearing to have an extraordinary effect in stimulating menstrual functions.

In some cases of scanty menstruation, instead of the flushed and congested complexion mentioned above, there is extreme pallor of the face and body generally, amounting almost to pernicious anæmia,

associated with obstinate constipation and other dyspeptic symptoms. In conditions of this kind I have almost invariably seen the very remarkable renovation of health take place under the administration of the following mixture for a month or two, namely:

℞ Ferri et ammonii citras . .	ʒiiss.
Ammonii carbonas . . .	ʒj.
Liq. arsenicalis . . .	ʒiss.
Syrup. simpl.	℥ss.
Aqua ad	℥x.
M ft. mist. cujus cap. . .	℥ss.

ter in die post cibum.

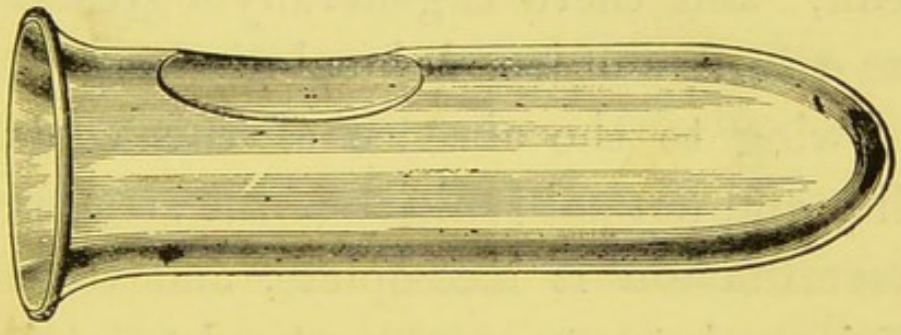
I have known the pallor and other symptoms of chlorosis yield within a fortnight to this medicine where other forms of iron had been administered without effect for many months.

Vaginismus, or Spasmodic Closure of the Vagina, is another very frequent and distressing symptom in sterility, and often an important, if not the sole, factor in its production.

In cases of this kind the vaginal passage is so extremely sensitive that the moment sexual approach is made it contracts with a painful spasm, and the act is thus rendered nugatory and incomplete.

This distressing malady, which is often exhibited in women of a highly nervous temperament, can generally be cured by complete dilatation of the vagina, without incision, and if this is done under the

FIG. 7.



local influence of cocaine, little or no inconvenience need be caused. A Sims' glass dilator (Fig. 7) should be introduced after the operation and left *in situ* for an hour daily for a week or so.

The opposite condition to vaginismus, and an important impediment to conception, is a

Relaxed Condition of the Vaginal Passage. I have known the greatest unhappiness and heartburning to arise from this source, which, irrespective of causing sterility, is often a serious bar to the efficient performance of marriage.

For some reason or other in such a case all the structures in the immediate neighbourhood have become relaxed and flaccid, and have lost their muscular contractility; the entrance to the parts lies open and "feels weak," and there is generally a greater or less quantity of leucorrhœal discharge.

Owing to the absence of this contractility and normal tonicity of the structures, **insemination** is incomplete, and the fertilising element, unable to be retained during coition, is rejected immediately after its reception, thus rendering the act abortive, to the disappointment and annoyance of those concerned.

This is often a serious cross, which women have to bear without a murmur, hiding it from the knowledge of the world, and suffering all alone.

Indeed, none but women themselves, or those who hold a fiduciary position towards them, can know how sad is their lot sometimes; how patient and long-suffering they are, and how brave as compared with men in the endurance of pain and hardships.

Extreme cases of this abnormal condition of the vagina, when due to local causes, is capable of cure, or relief, by a modification of the operation known as "posterior colporophy," or perinæorrhaphy, if the perinæum is the source of the trouble.

Should the relaxation, however, arise from general muscular atrophy, "electro-massage" will usually effect the object desired, and by increasing the padding of fat in the contiguous structures, brace up the vagina and uterine appendages to a corresponding degree.

A not uncommon malformation met with in sterility, and, when present, often a serious impediment to marriage, is

Hypertrophic Elongation of the Cervix Uteri (Fig. 8), which sometimes extends

almost to the vulva, and thus inconveniently blocks up the vaginal passage.

FIG. 8.

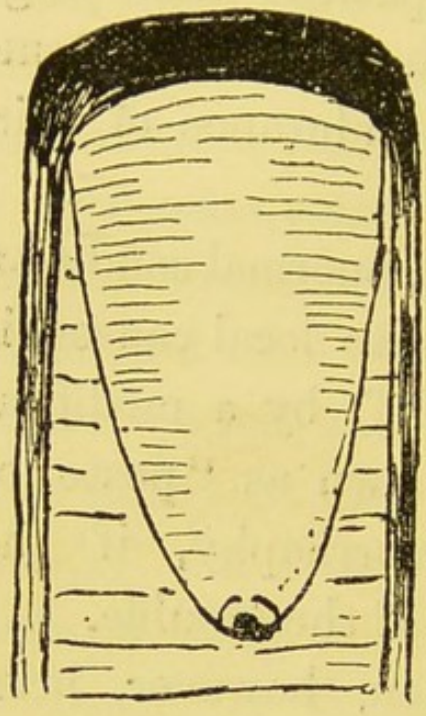


FIG. 9.

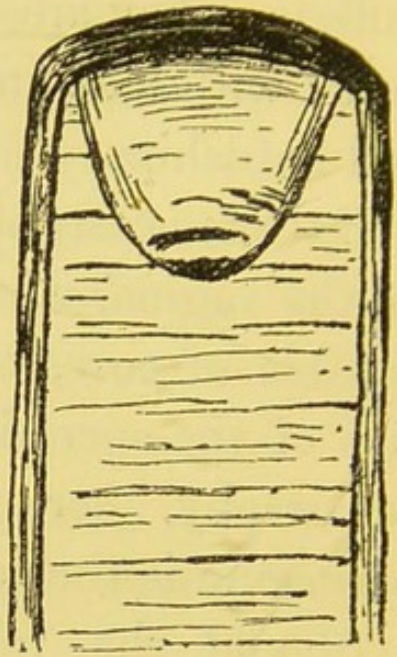


FIG. 10.

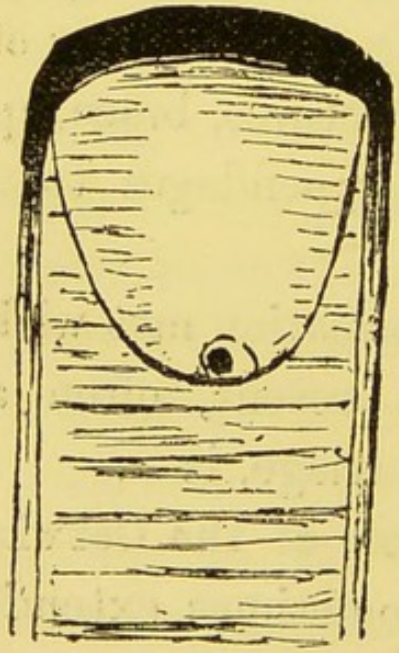
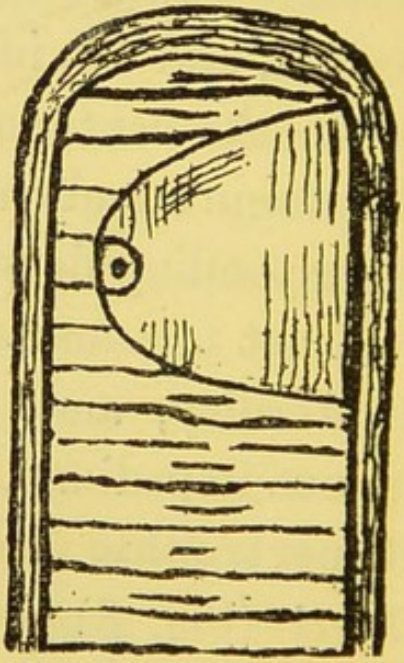


FIG. 11.



In extreme cases of this kind, it is necessary to amputate a portion of the cervix before the subject of this malformation is rendered nubile, and sometimes this proceeding is the only remedy for the extreme **dysparunia** often attendant upon even moderate elongation of this organ.

After amputation it will be necessary to keep the uterine canal efficiently open by means of an intra-uterine stem worn for at least a month.

Another condition that not unfrequently demands the interference of the surgeon is an

Undue Development of the Hymen, which I have known in several instances to prevent the consummation of marriage for many years after its solemnisation.

This obstruction is easily dealt with by means of free dilatation in the manner recommended for vaginismus, and, as in that malady, incision is seldom required. If the mucous membrane of the parts concerned is rendered anæsthetic by means of cocaine, little or no inconvenience is suffered

from the operation, but in some highly nervous patients, and where the arch of the symphysis pubis is at fault, it may be necessary to produce general anæsthesia before performing it.

Uterine Fibroids are frequently a bar to conception, though there are numerous exceptions to this rule, but when pregnancy occurs abortion is generally the consequence.

It is not my purpose to discuss at any length the controversy existing between the advocates of the electrical, medicinal, and spaying methods of treatment of this complaint, but will confine myself to a statement of the results observed in my own practice.

I have in many instances carried out the details of the first method mentioned, after the manner recommended by Apostoli, but have long come to the conclusion that it has no advantage over, and is not so reliable as, that by rest and medicine.

This latter plan of treatment has **never failed** in my experience to effect a **practical**

cure, and some of the largest fibroids have been completely dispersed by these means. Where complete rest is employed for any length of time it is essential to keep up the general health and strength of the patient, and prevent wasting of the muscular structures by means of daily "massage," and the drugs that I have found most successful in conjunction with this are a combination of hamamelis and ergota.

The advocates of spaying say that this method of treatment is very tedious. I grant that it is so in many cases, though certainly not in all; but it is at least safe and sure. A little while ago a lady, whose health had been greatly undermined, and even her existence threatened on many occasions, by the metrorrhagia, and oft-recurrent pelvic inflammations due to this disease, came to me for treatment, and in a short time greatly improved under the rest and medicines prescribed.

But happening to become acquainted with an advocate of the spaying method of treatment, he persuaded her to undergo

that operation, with a fatal result in three days after. This is far from being an isolated case in my experience, and therefore a sufficient reason, it appears to me, to hesitate before adopting so dangerous an alternative.

Where the fibrous tumour is not of a large size, pregnancy is a common sequel to the treatment by medicine and rest.

Another not uncommon cause of sterility is

Neurasthenia, or General Nerve Prostration, a malady which has of late years occupied the attention of the profession to a very large extent. There are certain forms of nervous derangements, and associated functional disorders, that had hitherto baffled the whole repertory of remedies in the hands of the physician, and the subjects of which have become so degraded in health as often to find the burden of existence greater than they can bear.

The etiology of these symptoms can almost invariably be traced to overstrain

of some sort, mental, physical, or functional, and the manner in which they express themselves are as various as the dispositions of the mind and body that manifest them. The common result, however, is a greater or less prostration of the nervous powers, ranging from chronic depression of spirits to extreme melancholia.

The subjects of these disordered sensations, having in time exhausted the patience of their friends and the skill of their medical attendants, usually drift in despair into that vast army of medicine-swallowers which annually swells the coffers of those who trade upon the credulity and weaknesses of mankind, and ultimately sink into that state of **chronic invalidism** where the only occupation is to brood upon the various phases of a malady, and often the only hope the release that comes with death.

As many such cases have been restored to health and vigour by means of "electro-massage," it is difficult to understand why this remarkable remedial agent is still so

much neglected by the profession at large.

In June 1883 I published an article in the *Lancet* on this subject, and the extraordinary results there recorded have been fully maintained in my practice by further experience.

Soon after the publication of that article I received a letter from a medical man, stating that he had read the cases related therein with much interest, and was so struck with the facts given that he wished to place a patient of his under my care, if I considered her case a suitable one for the treatment recommended. Arrangements were accordingly made for a visit, and at the interview I ascertained the following facts :

Miss M——, aged twenty-four ; family history fairly healthy ; felt quite strong and well until she was about eighteen years of age, when certain uterine troubles began to afflict her, causing gradual loss of strength and a feeling of prostration upon the least exertion.

Subsequently her appetite became impaired; she suffered frequently from indigestion, slept badly, and was much depressed in spirits. She remained in this condition, fluctuating to and fro, for several years, taking medicine constantly, but with no benefit whatever, when she became much worse, gradually lost the power of walking, and was bedridden for twelve months before my visit to her.

Several physicians and surgeons had been called in from time to time in consultation, and one of the latter had ordered a plaster-of-Paris jacket, under the impression that she was suffering from disease of the spine.

Upon examination I found that she was unable to stand without the support of a person on either side, or to put one foot before the other, and, in fact, presented all the appearances of a confirmed paralytic.

After a careful consideration I came to the conclusion that the symptoms were due, not to any organic lesion of the nerve centres, but to functional inanition only.

Under these circumstances she was duly placed under treatment, and in a short time began to progress in a most remarkable manner, gained flesh and appetite rapidly, and visibly improved in many other respects.

In a fortnight she was able to walk across the room with the assistance of the nurse; in a month she descended and ascended a long flight of stairs without any aid whatever, and within two she left the institution practically well, requiring time only to perfect her recovery. She went for change of air to Scotland, where she made a protracted stay, and in a little while wrote to say that she had continued to improve, and had so far recovered as to be able to climb about the hills in the neighbourhood without any undue fatigue.

On Thursday, the 23rd of October, 1885, she presented herself at my consulting rooms, but did not give her name.

On being shown in, a young lady entered with a strong, firm step, looking the picture of health.

"You don't remember me, I see?" she said, observing my lack of recognition.

"I can't say I do," I replied.

"I thought you wouldn't," she answered, "and so I would not give my name. Don't you remember Miss M——?"

I then recognised the lady whose case I have just related, but the change in her appearance was so remarkable that it is no wonder that I had failed to do so in the first instance.

Such health transformation is being enacted under "electro-massage" daily, and yet there are practitioners who still drench their patients with nauseous compounds made up of the most heterogeneous elements with a persistency worthy of more brilliant results.

Disease of the Fallopian Tubes and Ovaries as a cause of sterility need not occupy our attention long, inasmuch as it is generally outside the sphere of ordinary remedial measures, and often demands an operation for its cure that in itself is a bar to conception.

Where one tube or ovary only, however, is diseased, treatment by rest, hot water douches, and suitable medicines internally, or by the removal of the affected structures, may place the patient in a more favourable position to become a mother, but at the best the chances of conception under the circumstances are not very great.

Valvular folds of endometric mucous membrane sometimes impede conception, and I have known pregnancy to follow upon rupture of this membrane by introduction of the sound.

Gonorrhœal Inflammation of the Uterus and Fallopian Tubes is not an uncommon cause of sterility, and must be treated locally in accordance with the special symptoms present before impregnation is likely to occur.

This specific form of inflammation appears to have a very degrading effect upon the sexual system, and sterility due to this cause is often of a very obstinate character.

Constitutional Syphilis, though not a bar to pregnancy, must be regarded as a

frequent factor in sterility, owing to the tendency of the ovum to be aborted at an early age. Where the taint in the system is very pronounced a woman seldom reaches to full term, and is usually the subject of oft-repeated miscarriage.

Under these circumstances, a course of anti-syphilitic remedies both for her and her husband are generally necessary before a live child can be born.

The foregoing are the principal causes of sterility met with in practice, although there are many other conditions of the sexual system that may produce that result which it is not necessary to formulate here.

It is a curious fact that women who are sterile are often very pretty and graceful, but have frequently cold and unsympathetic dispositions, requiring the stimulus of society and sometimes even of alcoholic excitants to keep them up to the level of their spirits.

I have seen such temperaments change in a remarkable way when their possessors have borne children, and the

maternal instincts have thereby been lighted up.

Subjoined are the notes of some cases that may be found interesting as illustrations of some of the causes of sterility enumerated in the preceding pages.

Case No. 1. **Stricture of Uterine Canal —Pin-hole Os—Dysmenorrhœa—Dyspar-unia.**—In the summer of 1880, Mrs. L——, aged twenty-six, residing in a suburb of London, consulted me for the excruciating pain she suffered at her monthly periods.

She had been married **six years**, without any sign of pregnancy, and all her sufferings had greatly increased since her marriage. During the first three days of menstruation her agony was so great that she writhed with pain, and was often obliged to be kept under the influence of opium or chloroform to enable her to bear it.

The consummation of marriage, always an act of indifference to her, had become of late repugnant and painful, and was almost abandoned on that account. She had no particular desire herself for children, but

her husband was much disappointed by her sterility, and the relations between them on this account were often of a most unhappy nature.

A local examination disclosed a stricture of the womb with a pin-hole Os, through which it was impossible to introduce the sound. I incised the cervix in the manner described in my article on that subject, and she became pregnant in six months after, duly giving birth to a daughter.

Case No. 2. **Pin-hole Os—Stricture of Canal, Dysmenorrhœa, Endometritis—Previous Operation.**—In 1882 Mrs. H——, aged twenty-nine, residing at Forest Hill, came to me complaining of a distressing leucorrhœal discharge, which caused her great annoyance, and was the source of much weakness and languor.

She had been married nearly **eleven years**, had never had any signs of a family, and had consulted a well-known gynæcologist in London on this subject, who had operated on her two years previously without any benefit.

Examination disclosed an almost impervious stricture of the womb with considerable cervical catarrh, and the fact that the incised parts had cicatrised back into the condition in which they originally were, which could not have happened if an intra-uterine stem had been used in the manner that I have indicated.

I explained the present state of her case, and advised another operation, with the result that within twelve months she gave birth to a daughter.

Case No. 3. **Conical Cervix—Frequent Abortions, Placental Polypus, Serious Floodings, Severe Internal Hæmorrhoids.**—Mrs. S——, aged twenty-three, residing in a northern suburb of London, came to see me in September 1885, on account of a violent flooding, attended with paroxysmal pain of a severe character, which had resisted all treatment for the previous six weeks.

I ascertained from her that during the **four years** of her married life she had had a great many miscarriages, scarcely re-

covering from the effects of one before she conceived again, and aborted at about the second or third month of pregnancy. She had always lost a great deal of blood at these times, but on the present occasion the hæmorrhage was much more severe, and had lasted longer than usual.

Her blanched appearance and small, rapid pulse clearly declared the urgency of her condition and indicated the necessity of immediate steps for her succour. Suspecting that some constituent of the abortion was being retained within the cavity of the uterus, I urged her to go at once into a medical home in the neighbourhood, where I duly removed a portion of placenta adherent to the uterine wall, which had been keeping up the bleeding.

The hæmorrhage soon ceased upon this, and, subsequently discovering that an extremely conical cervix with a small Os tincæ, was the cause of the repeated abortions, I recommended an operation for its cure.

This she underwent shortly afterwards,

with the result that in twelve months she gave birth to a full-timed male child, and has not aborted since. Curiously enough this lady came to me again on the 16th of December 1892, looking, if possible, more blanched than on the occasion of her first visit.

It appears that in the interim she had had three children, and for six months past had suffered from severe hæmorrhage, of a paroxysmal character, due to extensive internal hæmorrhoids, which, after two days' rest in bed, I removed by incision and ligature, with the result of complete cure.

Case No. 4. **Severe Internal Hæmorrhoids—Profuse Bleeding—Conical Os—Extreme Dysmenorrhœa.**—In December 1883, Mrs. B——, aged twenty-eight, living in Highbury New Park, consulted me for severe hæmorrhage during the action of the bowels and the pain and prostration incident thereon.

Examination disclosed several large hæmorrhoids protruding beyond the sphincter of the bowel, which was almost

paralysed by the dilatation they had so continuously exercised.

I recommended their immediate removal, which in due time I effected, by means of incision and ligature, with the result of her complete recovery.

In April 1887 she consulted me again, on this occasion for extreme dysmenorrhœa, which was seriously affecting her health, that had been quite restored for a time by the operation I had previously performed.

I ascertained that she had been **eight years married**, never had conceived, and that the menstrual suffering, always present more or less, had greatly increased of late. The symptoms were due to a conical cervix, with a pin-hole Os, which I treated by incision and electrolysis, and she became pregnant in the following July, giving birth in due time to a daughter.

Case No. 5. **Atresia Uteri—No Subjective Symptoms to Indicate its Presence.**—On the 17th of June 1886 a lady, thirty-six years of age, living near Man-

chester, and **thirteen years married,** came to consult me.

She and her husband had commenced their married lives under very humble circumstances, but Fortune had smiled upon his undertakings, and at the time of her visit to me he was a wealthy manufacturer.

The pleasing amenities that money can command were incomplete for both because of her sterility, and for many years they had yearned in vain for a child to bear their name, and be the object of that love and tenderness that lay fallow in their hearts.

Her case was one of extreme mechanical obstruction of the cervical canal, and was remarkable from the facts that she had **never suffered from any menstrual pain or irregularity whatever, and had always enjoyed the most perfect health.** I recommended an operation, which was performed a few days after, and within twelve months I had a most grateful letter announcing the birth of a fine boy.

CASE No. 6. **Dysmenorrhœa—Scanty**

Menstruation—Remarkable Action of Uterine Electrolysis. — Another case which afforded me much satisfaction was that of a patient upon whom I operated a few months anterior to the one last mentioned.

She was thirty-four years of age, lived in a remote part of Sussex, and had been **eight years married** without any family. She was a gentle, amiable, and tender-hearted woman, and peculiarly fitted for the duties of maternity. The dysmenorrhœa and scanty menstruation from which she suffered were her proximate reasons for consulting me, and these I found were due respectively to uterine stricture with a small Os tincæ and general anæmia.

An operation, followed by ferruginous emmenagogues, did not relieve these ill effects to the extent I had expected, and as she lived some distance from town I had no immediate opportunity of following up these remedies by any others.

In about six months, however, she called to see me again, and I then applied

electricity to the interior of the uterus in the manner that I have already detailed in a previous article, and told her to see me again as soon as convenient.

In a short time, however, she wrote to say that the electrical application had quite cured her, and she had reason to think that she was pregnant, which subsequently proved to be the case.

There is not the least doubt that we have in electrolysis in conjunction with incision, the most effectual remedy known for dysmenorrhœa, and I have never failed by these means to give relief or effect a cure in any case **uncomplicated with displaced** or **diseased ovary**, or **membranous exfoliation**, and in many of these also its application has been followed by great benefit.

In several instances in my practice, where incision alone had failed to give relief, the supplementary treatment by electrolysis has effected a complete cure.

Case No. 7. **Uterine Stenosis—Extreme Dysmenorrhœa—Remarkable Effects of**

Electrolysis.—In September 1886 I operated upon a young married lady, living in Stroud Green, for stenosis of the uterus, which occasioned extreme dysmenorrhœa and sterility. The pain not having abated to the extent I had expected after the operation, I applied electricity to the uterus bi-monthly for a short time, with the result of greatly decreasing the distress at each epoch, until the dysmenorrhœa ceased altogether, and she became pregnant, giving birth at the beginning of the year 1888 to a girl.

Case No. 8. **No Objective or Subjective Symptoms to account for Sterility, except, perhaps, somewhat Scanty Menstruation—Effects of Electrolysis.**—In July 1885 a young married woman, aged twenty-five, consulted me as to the cause of her sterility, and upon examination I failed to discover any apparent reason for it.

The sound passed easily and indicated a normal position and size of uterus; menstruation was stated to be scanty, but

coitus natural, and she had always enjoyed excellent bodily health. I confessed my inability to account for her sterility, but advised her to try a course of uterine electricity in the hope that it would be of service.

She did so, and became pregnant in a few months after, giving birth in due time to a daughter. Whether the electrolysis stimulated the latent genetic forces in some manner difficult to explain; whether it affected ovarian dehiscence, or other physiological action, it is impossible to say, but there is no doubt that in this, as in many other instances, it was a valuable supplement to the surgical treatment of sterility.

Case No. 9. **Conical Os—Extreme Ante-Version—Acute Dysmenorrhœa.**—The case of Mrs. S——, aged thirty-seven, living at the West End of London, the subject of the above symptoms, who consulted me in June 1887, is remarkable from the fact that she became pregnant within two months after incision of the cervix for

relief of the same, although her husband was then nearly seventy years of age, and she herself admitted to being quite **thirty-seven.** They had been married several years without any previous signs of pregnancy.

CASE No. 10. **Nerve Exhaustion—Uterine Catarrh—Relaxed Condition of the Vagina.**—The subject of the above symptoms, a member of a noble and ancient house, consulted me in January 1887 with respect to her sterility.

She had been married **six years** without any signs of conception, and was most anxious to become a mother, not only for the satisfaction of her maternal yearnings, but for the reason that her offspring would be heirs to large properties and distinguished social honours. She was a thin, pale, delicate woman, incapable of any active exertion, and of a highly nervous organisation.

The vaginal passage was very relaxed, the uterus extremely mobile, a copious mucous discharge issued therefrom, and

the whole organ was situated low down towards the vulva.

The muscular structures generally were greatly wasted, and she was very anæmic. At my advice she underwent a course of "electro-massage," and special local treatment for the catarrh, with the result of rapid recovery and ultimately the birth of a daughter.—I subsequently had her sister, the Countess of W—— under treatment for a similar state of health, and she gained **twenty-one pounds** in weight in three weeks under "electro-massage," and recovered strength and energy to a corresponding degree.

Case No. 11. **Extreme Density of Hymen—Dysparunia.**—In May 1886 a tall, well-developed woman, aged thirty-six, married four years, consulted me with respect to the non-consummation of her marriage, and the distress that the attempt to do so had occasioned her at various times during her nuptial life.

Examination disclosed an abnormally dense condition of the hymen, which had

rendered her a **virgo intacta** during all this time. Under an anæsthetic I ruptured the obstructing membrane, freely dilated the vagina, and she became pregnant in a few weeks—in due time giving birth to a girl.

I have had four instances lately of more or less abnormal density of the hymen obstructing the consummation of marriage for periods varying from nine months to three years, but it is probable that incapacity on the part of the husbands was a contributory cause in some of these.

CASE No. 12. **Hypertrophic Induration of Uterus—Extreme Loss at Menstrual Epochs—Granular Degeneration of Cervix.**—The subject of the above symptoms, aged thirty-three, married eight years, living at the East End, consulted me with respect to her excessive metrorrhagia and the frequent prostration consequent thereon. It appears that she had a miscarriage about nine months after marriage, and had never been well since. Conception had not occurred again, and she had quite

abandoned all hope in that respect. Examination disclosed the above physical conditions of the womb, together with general enlargement of the cavity.

There was no evidence of any serious organic change in the Fallopian tubes or ovaries, and the uterus was fairly mobile in every direction, an unusual thing with so much chronic mischief.

I treated the granulations with fuming nitric acid, depleted several times by means of artificial leech, ordered hot douches and as much rest as possible, and prescribed hamamelis and ergota, which she took for some months, with the result that in a short time the metrorrhagia ceased and she became pregnant.

When she was about five months in this condition she consulted her local medical man with regard to her state, and he pronounced it to be due to "change of life," but the subsequent birth of a child in due time disproved the correctness of his diagnosis. This poor woman was badly torn in her confinement, but otherwise did

well, and I subsequently repaired the ruptured perineum.

CASE No. 13. **Hypertrophic Induration of Womb—Endometritis.**—Mrs. D——, aged thirty-five, **married eight years**, living at Sawbridgeworth, consulted me in August 1888 principally for a severe internal pain which attacked her regularly every month about midway between the menstrual periods. She also complained of a disagreeable discharge, and expressed her deep disappointment and that of her husband that she had not had any children.

Examination disclosed the above objective symptoms, the cause of which was obscure. I also ascertained that there was a total suppression of all sexual feeling.

I treated the cervical catarrh with a cylinder of the sulphates of zinc and potass introduced into the cavity of the womb, where, slowly dissolving during four or five hours, it came in actual contact with the diseased surfaces.

This cured the discharge and relieved

the pain, which was, probably, of neurotic origin, and I then applied **Electrolysis** for the purpose of arousing the dormant sexual feelings and the genetic forces in general. This had the desired effect, and she became pregnant in the second week of the following May (1889), and duly gave birth to a son. I have seldom known the craving for maternity so yearning as in this case, or its fulfilment a cause of greater joy and satisfaction.

CASE No. 14. **Sterility induced by Constitutional Syphilis.**—Mrs. B——, residing in Manchester, aged twenty-seven, consulted me August 1888 for the following reasons—namely, that having had a child four years ago and not conceiving since, she felt that there must be something wrong with her, especially as her health had much failed and she was subject to frequent attacks of sore throat with a cutaneous eruption.

It was not difficult to trace the history of syphilitic inception, and a course of the ordinary specific medicines, both for

her and her husband, resulted in her becoming pregnant in about six months after. I advised complete continence for twelve months, but the non-fulfilment of my instructions did not appear to affect the health of the child adversely.

CASE No. 15. **Conical Cervix—Pin-hole Os—Extreme Ante-Version and Dysmenorrhœa.**—One of my most affectionate recollections in the past connects itself with a very early period of my professional career, shortly after I obtained my first diploma and took charge of a doctor's practice in Lincolnshire during his long illness.

I there made the acquaintance and became the intimate friend of a clergyman who was the curate of the parish. He was a splendid example of a large-hearted, sincere, and earnest Christian, and possessed, in my estimation, just the qualities for a successful religious teacher.

Like myself he delighted in a country ramble, and in its interesting environments of wild animal life. During many congenial excursions together we possessed our-

selves of various specimens of bird, beast, or flower, to add to our modest collection of curios, and, day by day, grew to regard each other with that warmth of feeling that disingenuous youth alone can know.

Time passed, and we were separated—years rolled on, and the incidents of our friendship became a dim recollection jumbled up with others of the same kind. At length, in 1889, I received a letter from my old friend, then translated to a rectorship in an adjoining county, informing me of his marriage two years previously, and of the disappointment both he and his wife experienced through not having had any children. In accordance with a wish expressed I made an appointment to see her, and at the interview discovered the objective and subjective symptoms described above.

The case was a very typical one of mechanical obstruction of the uterus causing sterility, and its removal by means of incision, and the introduction of an intra-uterine stem was soon followed by the

complete relief of the extreme dysmenorrhœa, and by the birth of a son in the autumn of 1890.

Case No. 16. **Uterus Apparently Undeveloped—Vagina Relaxed—Endometritis.**—Mrs. P——, aged twenty-five, married two years, wife of a first officer in a Mail Boat Company, came to me in July 1890 in great trouble of mind with respect to her sterile state.

She was of a peculiarly babyish and fragile appearance, but enjoyed very good health nevertheless, and said she had never been ill in her life. The uterine functions were perfectly healthy, and she had nothing whatever to complain of with the exception of her sterility.

Examination disclosed a small uterus, and, apparently, an altogether ill-developed sexual system, and there was a certain amount of endometritis. I expressed an unfavourable view of her prospects of maternity, but advised her to try the effects of uterine dilatation, and electricity subsequently, which she did.

During the process of dilatation I found that what had appeared to be an insufficient uterus was in reality only a thin *cul de sac* of mucous membrane dividing that organ into two chambers. Its rupture and permanent patency of the canal by means of an intra-uterine stem was followed by pregnancy in a few months after, and in due time I had a joyous letter from her, announcing the birth of a son.

Case No. 17. **Valvular Fold of Uterine Mucous Membrane probably the Cause of Sterility.**—The case of Mrs. S——, living in Norfolk, who consulted me in August 1890, is remarkable from the fact that the mere introduction of the sound on that occasion appeared to remove some obstruction that had impeded conception for **eight years** previously.

The cervical canal was somewhat constricted, and the sound passed with some difficulty, but no other surgical proceeding was adopted, and I learned that she fell pregnant almost immediately after her visit to me, and duly gave birth to a child,

the sex of which never came to my knowledge.

Case No. 18. **Conical Cervix—Pin-hole Os—Slight Dysmenorrhœa.**—Mrs. B——, aged twenty-eight, married two years, the wife of a captain in the Mercantile Marine, consulted me in January 1891 with respect to her sterility. She had never suffered from any ill-health, and with the exception of some slight dysmenorrhœa, the uterine functions were quite normal.

Examination disclosed the above mechanical cause for her disappointment, the removal of which by incision was quickly followed by pregnancy.

Case No. 19. **Extreme Anæmia—Scanty Menstruation.**—Mrs. S——, the wife of a groom, aged twenty-six, came to me in March 1891, stating that she had been twelve months married, never had any signs of pregnancy, and had been in failing health for a long time past.

Her complexion, at the time of her visit to me, looked as anæmic as white marble,

while the conjunctiva and the mucous lining of the lips, mouth and gums appeared almost bloodless. Her intensely black hair and large dark eyes presented a startling contrast to her white face, and produced on the beholder the impression of a re-animated corpse.

She had taken "all sorts of medicine" from time to time for many months with little or no benefit whatever, and had become more feeble and white of late. There were no objective symptoms to account for the sterility, nor any endemic reasons for the anæmia.

I prescribed for her the preparation of iron, a formula for which I have already given, and within three weeks the normal blood tint began to show in her face, and in four months she became pregnant, and in due time gave birth to a son. To obviate the tendency to anæmia I told her to take Flitwick water regularly, which, as I ascertained afterwards, had the desired effect in a very marked degree.

Case No. 20. Mrs. S——, a clergyman's

wife, aged thirty, consulted me in June 1891 with regard to her general bad health. She had suffered for some time past from a series of symptoms which her local doctor, she said, attributed to heart disease. The result was that she had become more or less an invalid, and had been obliged to give up all kinds of pleasure or employment that involved any undue exertion.

Upon examination I could not find any sufficient cardiac lesion to account for her condition, and gave it as my opinion that it was due entirely to the dysmenorrhœa and extreme ante-version from which I found she suffered. I advised treatment by dilatation and the introduction of an intra-uterine stem, which was duly adopted, with the result that she wrote to me in two months to say that she was feeling quite well, and had commenced to play tennis, and go about her usual duties without any inconvenience whatever.

This lady, who at that time had been four and a half years married without any

signs of conception, subsequently became pregnant, and had no return of the abnormal symptoms previously experienced.

Case No. 21. Mrs. S——, aged twenty-seven, two years married, the wife of a barrister practising in Australia, came to consult me in October 1891 with respect to the general bad state of her health, but more particularly with regard to the cause of her sterility. At the time of her visit to me she was very emaciated in appearance, and suffered from a train of dyspeptic symptoms which caused her a great deal of physical and mental distress. There was no evidence of any organic lesion, nor any objective cause for the sterility. I had her at once placed under Electro-Massage, and within a month she became quite strong and well, soon after returned to Australia, and in the course of twelve months wrote to me to announce the birth of a son and the complete recuperation of her health.

Case No. 22. **Large, Multiple, Sub-**

peritoneal Fibroids of the Womb.—Lady C——, aged thirty-seven, married ten years, consulted me in November 1891 for excessive loss at her menstrual periods. Examination disclosed several large fibro-myomatous tumours of the womb extending upwards almost to the umbilicus, and outwards to both groins, but more extensively in the right. I ordered her a mixture of hamamelis and ergota, which soon arrested the hæmorrhage, and by February had considerably reduced the size of the tumours, when I lost sight of her for a time. In October 1892 she called on me again, expressing the fear that the tumour had grown again, when I was able to give to her the gratifying information that she was at least four and a half months pregnant, which proved to be correct, for in due time she gave birth to her first child, after twelve years of sterile marriage.

Case No. 23.—**No Objective or Subjective Symptoms to Indicate Sterility.**—Mrs. P——, aged thirty, married three years,

residing at Portsmouth, consulted me, in June 1891, with respect to her sterility. She stated that she had always enjoyed excellent health, and that all her bodily functions were quite regular and normal. Examination disclosed no reason for her sterile state, but I pointed out to her that a very slight and sometimes imperceptible obstruction within the canal of the uterus was often sufficient to produce this condition, and advised the dilatation of that organ. To this she submitted, with the result of a son twelve months after.

Case No. 24. **Ante-Version — Menstruation Normal.** — Mrs. T——, aged thirty-two, residing at Sutton, Surrey, married fourteen years, consulted me, in April 1892, with respect to her sterility. She came, she said, with but faint hope that before she grew too old something might be done to remedy her state, for she was most desirous to have a child.

She was a very short, stout woman, always hearty and well, and had never been ill in her life. Beyond a slight mis-

placement of the womb forwards, there was nothing definite to account for her sterility, and the functions of the uterine organs appeared to be quite normal. I explained matters to her in the same way as in the last case, and recommended the same treatment, with the result that she became pregnant soon after, and gave birth to a child in March 1893.

CASE No. 25. **Conical Cervix—Pin-hole Os — No Dysmenorrhœa.**—Mrs. S——, aged thirty-three, residing in the north of Ireland, consulted me in June of last year, stating that she had been married for two and a half years without any sign of a family, and that she and her husband were most anxious to have children.

She gave her age as thirty-three, but looked much older, said that she had always had good health, and that the menstrual functions were quite regular, but there was a complete absence of any sexual feeling.

At a subsequent interview I learned that her husband was nearly seventy years of age, but still robust in health. Examina-

tion disclosed a conical cervix with a pin-hole Os, for which I operated a few days after, with the result of a son in March 1893.

CASE No. 26. **Pin-hole Os—Dysmenorrhœa.** —Mrs. M——, aged twenty-five, fifteen months married, was brought to me by her sister, the clergyman's wife, whose case is recorded at No. 20, in February 1893, on account of her sterility, both ladies suspecting the presence of some form of obstruction as the cause of the same, since conception had not taken place.

Examination disclosed an atresia uteri with ante-version, for which incision of the cervix was performed a few days after, with the result that pregnancy ensued in the following April, and in due time she gave birth to a full-time child, the sex of which I have neglected to record. This case is remarkable from the fact that though there was an extensive amount of endometritis, with some hypertrophy present on account of the long-standing

obstruction, yet pregnancy ensued before there could have been time for much recovery from these conditions, which are usually unfavourable to conception.

Case No. 27. Mrs. F——, aged thirty-nine and a half, living in Devonshire, consulted me in August 1893 on account of her sterile state. She had been married only six months, but as she was nearly forty years of age she felt that it would be unwise to defer advice upon the matter, since both she and her husband were most desirous of having a child, not only on account of their extreme parental yearning, but because a large property was entailed on their issue. The prospect of her barrenness appeared to have haunted both her husband and herself, and to have occupied their minds to a degree that much affected their tranquillity and happiness. Examination disclosed a constriction of the uterine canal, which I treated by free dilatation in a few days after, the patient wearing an intra-uterine stem for a fortnight only, with the result that a fine

healthy son and heir was born to them within eleven months after the operation.

On December 23, last year (1894), while staying a few days at Bournemouth for Christmas, I was telegraphed for to Teignmouth, South Devon, on an urgent consultation, and being unable to return on Christmas Day, owing to there being no train, I took the opportunity of visiting Mr. and Mrs. F——, who lived within twelve miles of that town. It was a lovely day and a lovely drive through scenery characteristically beautiful, along the valley of the Teign and to the foot of the Dartmoor range of hills. I arrived at their house, a perfect Devonshire country dwelling, remote and lonely, as they were about to sit down to an early and old-fashioned Christmas dinner, to which I was most kindly invited, and at which I was treated with that generous hospitality so peculiarly Devonian. The son and heir, about five months old, and giving promise of a lusty manhood, was introduced to the company after dinner, and I thus had an

opportunity of wishing him "A merry Christmas and a happy New Year" at a very initial stage of his career.

Case No. 28. **Acquired Sterility.** — This definition has been employed by various writers to describe that form of sterility which ensues upon a single pregnancy, and which is due to either an injury at the time of birth, or to some form of chronic disease set up in consequence, or to a permanent exhaustion of the genetic forces. The following case illustrates a not uncommon type of this condition.

Case No. 28. Mrs. B——, aged thirty-three, having her home in one of the South African Colonies, consulted me in October 1893, stating that as she had not had a child for six years and was anxious for a son, and as she had been from time to time in very bad health, she was afraid that there was something internally wrong with her.

Examination disclosed considerable hypertrophy of the uterus, chronic endo-

metritis, and a granular condition of the cervix. These morbid states were treated by the introduction of a cylinder of sulphate of zinc into the uterus, and the application of a saturated solution of carbolic acid and iodine to the granulations, together with a glycerine tampon superimposed over all. This treatment was continued every week or fortnight for four months, when all the lesions practically disappeared, and she became pregnant in a short time after.

Case No. 29. **Remarkable Effects of Electrolysis.**—Mrs. F——, aged twenty-eight, the wife of a clergyman, was sent to me in July last, 1894, by her father, a medical man in the country, under the following circumstances. For about eighteen months past she had suffered from increasing pain and loss at her periods, which often rendered her mentally and physically prostrate for some time after. At the time of her visit to me she had been married more than two years without any signs of conception, and the

disappointment incident upon this, together with the menstrual troubles, had changed her naturally bright and active disposition into one of fitful despondency and gloom.

Examination disclosed a considerable hypertrophy of the womb, with chronic endometritis, which I treated some time after by electrolysis and the internal administration of ergot and hamamelis.

The electrolysis was applied some seven or eight times between September and the end of November, when the dysmenorrhœa and excessive loss having entirely ceased, she discontinued her visits to me, and became pregnant in about a month after. On February 27 I had a letter from her to say that she hoped "to become a mother in September."

These cases might be multiplied to an extent that would be wearisome, and could serve no useful purpose.

It is said that an abnormal acidity of the vaginal mucus sometimes causes sterility by its destructive effect upon the sperma-

tozoa. Though I am not able to verify this by any experience of my own, yet I can quite understand the possibility of such an action on so delicately vital an organism as the one in question.

Should any suspicion of this nature arise, the vitiated secretion ought to be capable of rectification by means of vaginal injections of biborate of soda in tepid water, which might be used night and morning for some time.

I have not thought it necessary to enter very minutely into the description or treatment of all the various diseased conditions of the womb or its appendages, which may give rise to sterility, as some of them more properly belong to the department of gynæcology in general, but I have described to the best of my ability the surgical procedures that are more especially related to the relievable obstructions in the cavity of that organ and the impedimenta within the vagina.

I believe that my condemnation of the use of Küchenmeister's scissors in incision

of the cervix will be amply justified by those who have given the subject sufficient attention, and I have the temerity to think that the alternative operation that I have advocated will recommend itself to them.

My article upon the dilatation of the womb is the outcome of long experience in the various methods that have been employed from time to time, and the conclusions that I have stated with respect to the inability of laminaria or any other tents to meet the requirements of modern surgery will, I feel sure, be fully borne out by the judgment of others.

The application of electrolysis for the relief of dysmenorrhœa and the restoration of normal local sensibility has, as far as I am aware, never been resorted to outside my own practice, and I venture to hope that it will be found as valuable a remedial agent in the hands of others as it has proved in mine.

In conclusion, I would impress upon all operators in this department of surgery the necessity to first ascertain beyond all doubt

the absence of any chronic mischief in the pelvis before proceeding to carry out any operative measures for the cure of sterility, and equally I would insist on a **perfectly aseptic condition of the parts concerned in the operation, and of every article and instrument employed in its performance.**

One of the most reliable and convenient antiseptics of which I am aware is Burroughs & Wellcome's Soloids of Hydrarg. Perchlorid. by which a solution of any desired strength can be made in a few minutes.

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