

Key to electro-therapeutics.

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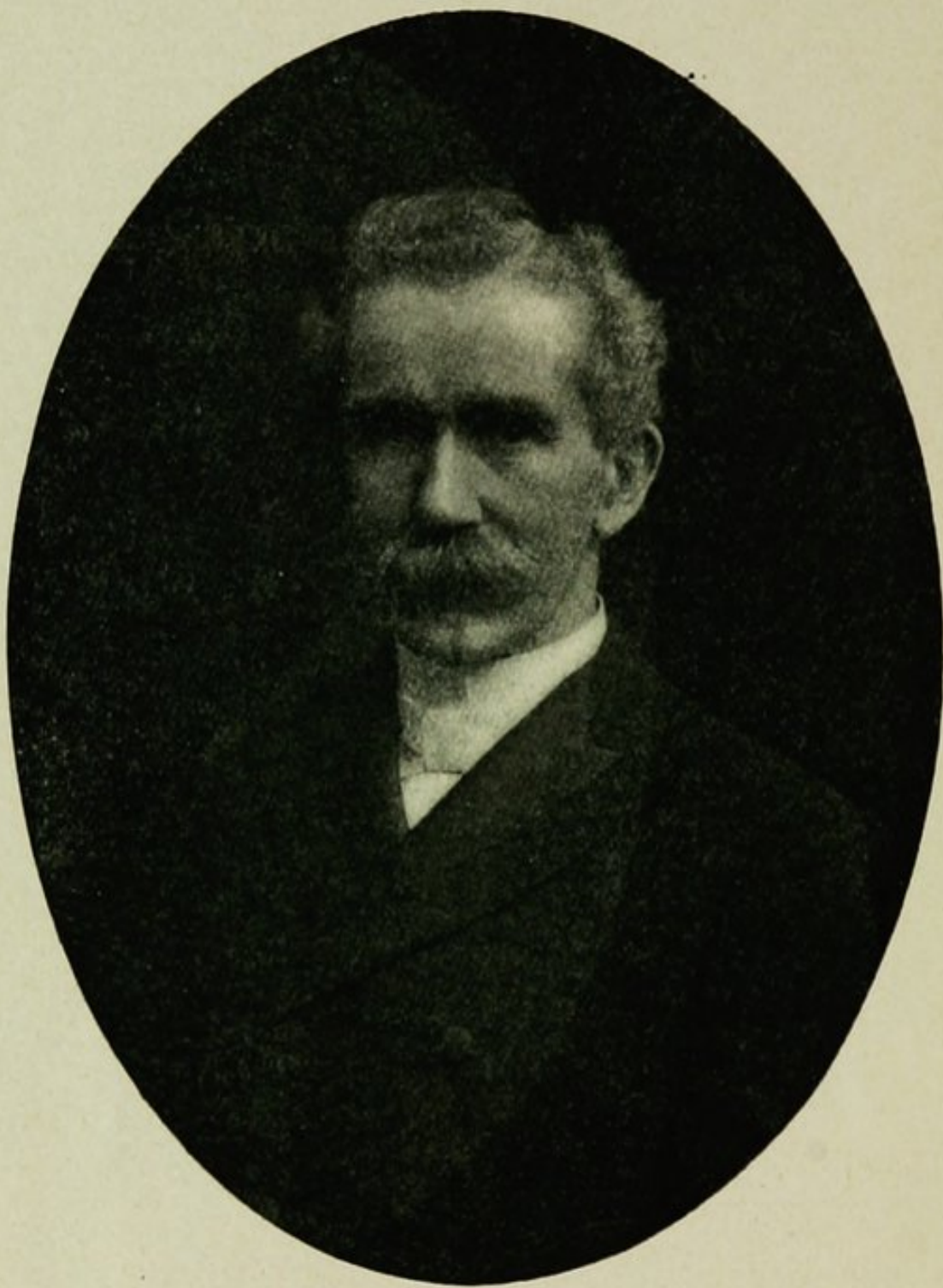
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SEYMOUR'S

Key to Electro-Therapeutics

BY

PROF. W. P. SEYMOUR

Psychologist

AND

Electro-Therapeutist

Newark, N. J.

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SECOND EDITION

Revised to Date

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INTRODUCTION.



IF there is one thought that should inspire the mind of man beyond all others, one fact for which mankind should be more thankful than all others; it is the fact that we live in the present age. The century which has just begun is the century for which all others have been spent. The life and energy, the brain and muscle, of all past ages have been utilized to make this century more glorious and desirable. This is truly an age of thought, reason, and scientific progression. Our intellectual atmosphere seems to be filled with new gems of scientific discovery, which promise a millennial dawn for the human race; and men everywhere, and in every line of thought, are eager to make a successful application of the principles involved. Nowhere, and among no class of thinkers, is this more true than among the medical profession. No longer does surgery and materia-medica alone, command the attention of the brightest minds in the medical profession; nor are they any longer confined to one particular school or line of thought; but with minds broadened by an investigation of

the experiences of their predecessors and illuminated by their own experiences and those of their contemporaries; they are bursting the shackles of bigotry and prejudice, and are applying the balm to human suffering; whether found in the old or new schools of therapeutical science. Yea, whether it be *materia-medica*, massage or electricity.

Thus with the "Search Light of Truth" and the fires of scientific investigation, they learn that (while the fundamental principles of Therapeutics may be maintained) the discovery of new methods of application claim advantages in branches which in times past have either been overlooked or ignored. Especially is this true of Electro-Therapeutics.

Like most every other branch of medical science, in its early inception, it was looked upon by the fraternity in general, as having a very limited value and sphere. Many baneful results followed the practice of the early devotees, through a lack of knowledge of its physiological and chemical analysis; and because of this many among the medical profession to-day, who are skilled in *materia-medica* and surgery, will tell us they have no faith in electricity as a curative agent. But notwithstanding the mistakes of our forefathers, the lack of faith and indifference in the minds of those,

who, being content with past experience, refuse to investigate its claims, we find a class of thinkers whose souls are fired with zeal and earnestness as they behold disease and death vanishing before the electric spark, or yielding to its mighty influence. This is said to be an "Electric Age" and electricity is not only destined to be, but now is, an important factor in medical science. Its electrolytic and cataphoric effects upon the human body have already awakened such an interest, and its value become so thoroughly accepted by many of the leading men in the profession, that there is left but little room for doubt as to the future universality of its practice. And not only is its virtue accepted by many great minds in the profession, but there is a growing public sentiment in its favor; and to meet the demands of his patient; the physician of the future must be somewhat skilled and equipped in this branch of medical science, or his practice will soon be relegated as a thing of the past. In presenting this book to the profession and public, I do so not because of the amount of new thought it contains upon the subject of Electro-Therapeutics, but to place in the hands of those who have little time to read, a simple book of reference, whereby they can readily turn to the thoughts and experiences of those who have made a study of the

particular case on hand. A simple treatise, which I trust will be found practical and useful in the hands of those who desire to use electricity as a remedial agent.

THE AUTHOR.

Electro-Therapeutics.



CHAPTER I.

IN order to meet the demands of the beginner in Electro-Therapeutics, perhaps it would be well to state a few facts with reference to the physics and physiology of electric currents. We will commence with what is known as the

STRAIGHT GALVANIC CURRENT.

The Anode (positive pole) is sedative. The Cathode (negative pole) is a stimulant. The current goes direct from the Anode to the Cathode.

To diminish irritability and congestion, and to neutralize the alkali in the human system, we should apply the positive pole to the seat of the disease. To stimulate, we should apply the negative pole to the seat of the disease.

A fact which is important to be remembered by the practitioner is, that the positive pole collects the acids and the negative the alkalies.

Sulphuric, muriatic, nitric and phosphoric acids are attracted by the positive pole, and soda, sodium, ammonia, lime, etc., are attracted by the negative pole. Hence, what is necessary for the physician to determine (in order to use electricity as scientifically, and perhaps as successfully as he would drugs) is the nature and condition of the disease and the temperament of the patient upon whom the application is made.

THE PHYSICAL EFFECT OF THE CONSTANT GALVANIC CURRENT

The physical effects of the constant galvanic current are electrolysis (chemical decomposition), catalysis (chemical reaction) and cataphoresis (electric osmosis). By the use of the constant current it is easy to determine functional and strictural conditions of nerve and muscle. When applied to the muscle certain contractions will occur at the closing of the circuit and will be relaxed at the opening of the same. Where a uniform strength of current is used, there will be found almost a uniform condition of contraction when applied to normal muscles and a variation when applied to muscles that are diseased. The positive pole of the constant current being a sedative and negative

pole a stimulant, all nerves of sensation can be excited by an application of the negative pole and their excitability diminished by the application of the positive.

Whenever there is a pain or soreness in the sensory nerves, as in neuralgia, the application of the positive pole of a continuous current for a few minutes will produce a sedative effect. Care should be taken not to shut off the current suddenly by removing the electrodes before gradually reducing the current, as a sudden break has an exciting effect, from the positive as well as the negative pole. In cases of paralysis, where the action of the sensory nerves has become dull and sluggish and the sensibility somewhat deadened, the application of the negative pole will soon increase the excitability and promote sensation in the diseased nerves. Hence, we say again, to relieve suffering use the positive pole of a constant current, and to stimulate action and sensation apply the negative. The above will serve as a general rule for the application of electricity to all disease.

THE FARADIC CURRENT.

The faradic current is what may be termed an induced magnetic current.

Its primary current has the same direction as the battery current, but differs from the straight galvanic in effects, from the fact that it has higher voltage and lower amperage. It has a polarity and is not an alternating, but an interrupted current. The frequency with which the interruptions are made determines in a great measure the physiological and therapeutical effects of the faradic current. The principal use of the primary current in electrotherapeutics is its stimulating action for exciting muscular contractions and for arousing the action of sensory nerves.

The secondary current is a to and fro, or alternating current. Its electro-motive force and amperage are governed by the number of turns in the coil. Where a fine wire of great length is used, the electro-motive force will be greater and the amperage less, than where a coarse wire of fewer turns is used. The physiological effects of the secondary current are both tonic and sedative. Where very fine wire of great length is used in the construction of a secondary coil, its effects approximate very closely to the sinusoidal.

SINUSOIDAL CURRENT

The sinusoidal may be termed a zig-zag current. It forms what is known in electricity as the "sine curve." It has a more soothing effect upon the patient than the ordinary faradic current, and having a regular and rapid change of polarity it is in reality a balancing current. If (as observed in the use of straight galvanic current) the positive pole collects the acids and the negative the alkalies; the rapid change of polarity in the use of the sinusoidal current will simply set the elements in the circuit between the poles in motion, and by the alternate course of their attraction, they will become proportionately distributed and balanced.

Hence, if in nervous or muscular diseases, where acids and alkalies have become unduly centered, causing inflammation or paralysis, we can bring the diseased part within the circuit between the poles of the sinusoidal current, it is reasonable to expect quicker and better results than with any other current.

STATIC CURRENT

In the first introduction of what is known as the static current, it was supposed to be directly produced by friction. Closer investigation discovered

it to be an induced current, hence the old style friction machines have largely given place to what is known as the influence or induction machines. The current produced by the modern static machine does not differ in principle from that produced by the use of a high tension induction coil. When applied to Electro-Therapeutics, the real difference which exists between the static current and that produced by the galvanic and faradic machines consists in the potential or possibility of the one over the other to increase the voltage and lessen the amperage. The galvanic current has low voltage and comparatively high amperage; in the faradic current the voltage is increased and the amperage is comparatively diminished.

The static current has a very high voltage and the volume is reduced to a fraction of a milliamperere.

THE ADVANTAGES AND DISADVANTAGES OF THE STATIC MACHINE.

There are many advantages which may be claimed for the static machine in Electro-Therapeutics, among which may be mentioned its power to excite muscular and nervous action without exciting the sensation of pain, which adapts it to a general electrization of the body in place of massage

The different methods of administering electricity through the use of the static machine, such as the spark, spray and breeze gives it the advantage over all other machines. Its high voltage furnishes it with great power to overcome the external and internal resistance, which necessarily occur from the construction and application of a static machine for therapeutical use. Another advantage of the static machine over others, is the psychic impression which it often makes upon the patient. I do not make this remark by way of jest, for in nervous troubles, especially, it is important to keep the mind of the patient favorably impressed with the importance of the treatment, no matter what form of therapeutics we may use.

The appearance of a fine static machine at once conveys to the mind of the patient the idea of force and efficiency ; hence, from the law of reciprocity that exists between body and mind, this of itself becomes a means to an end. Among the disadvantages of the static machine as constructed to-day, is the fact that its size and weight necessarily confine it to the use of office practice alone. Hence, patients who cannot reach the physician's office are necessarily deprived of its benefits. Second, it is subject to the influence of climatic changes. Oft-times in a temperature or atmosphere which most

effects the constitution of a patient, the physician finds similar constitutional effects produced upon the machine, and he needs a doctor for the machine as well as for the patient. Still we are living in an age of progress and there need be little doubt but that the time is not far distant when these difficulties will be overcome.

The static current may be used as a tonic or as a sedative. When properly used it may be termed a regulator of nervous troubles.

ANALYSIS OF THE DIFFERENT CURRENTS IN THERAPEUTICS.

Question—What are the prime uses of the straight galvanic current ?

Answer—Electrolysis, cataphoresis, catalysis, cauterization and anaesthesia.

Question—What may we understand by electrolysis ?

Answer—The dissolution of a compound (decomposition).

Question—What may we understand by cataphoresis ?

Answer—Chemical reaction promoted by the presence of a third unaffected substance. The introduction of a substance which resolves others into

new compounds by contact, without gaining or losing anything itself.

Question—What may we understand by cauterization?

Answer—The act of burning or searing some morbid part or tissue.

Question—What may we understand by anaesthesia?

Answer—An extreme sedative effect. The deadening of the sensibility of a nerve.

ELECTROLYSIS.

Question—To what use may electrolysis be applied?

Answer—It will be found of great service if properly applied, in gynecological work. In dissolving tumors and abnormal growths, also in reducing strictures of the urethra, hemorrhoids, etc. It may be successfully applied to the removing of superfluous hair, warts, moles, birthmarks, etc.

Question—Can you give us some idea of its chemical action upon an electrolyte (decomposable substance)?

Answer—As we have said before, electrolysis consists of the decomposition of elements. The electrical term for the decomposed elements (atoms or

molecules as they may be) is ions. The ions collecting at the positive pole are electro-negatives, and those collecting at the negative pole are electro positives. It is a fact known to all natural scientists, that elements unite to form compounds according to their equivalents, and are decomposed in the same proportion. Prof. Groothus, as early as the beginning of the nineteenth century, has given us the following theory.

In a vessel of water place two platinum electrodes attached to the binding posts of a straight galvanic battery. When the battery is set in operation, the current entering at the positive pole at once commences to decompose the molecules of the water into their chemical equivalents. Two atoms of hydrogen and one of oxygen are formed. The oxygen being the electro-negative, appears at the positive pole at once and is liberated there.

The two atoms of hydrogen combine with the oxygen of the next molecule of water, again liberating two atoms of hydrogen. This process of decomposition and recombination continues until there is no more oxygen left in the circuit with which the hydrogen can combine, then the hydrogen is liberated at the negative pole."

What is true of the vessel of water is proportionately true of any other electrolyte. By the use of

the straight galvanic current, the process of decomposition is constantly taking place within the circuit, and the acids and alkalies are attracted to the different poles in proportion to the strength of the current and the compound nature of the electrolyte. Hence, tumors, warts, moles or any abnormal growth may be dissolved by the use of the electric current, and carried out of the system to the different poles of the battery. The positive pole collects oxygen, chlorine and acids. The negative pole attracts hydrogen, soda and potassa.

CHAPTER II.

MODES OF OPERATING IN GYNECOLOGICAL WORK.

TUMORS.

What is necessary on the part of the physician is first to ascertain the compound nature of the tumor or growth. If it is found to be largely acidiferous apply the negative pole to the seat of the disease; if alkiline, apply the positive pole. In dissolving tumors in the region of the abdomen, I have found great success in placing the feet of the patient in water, with one pole imbedded in the water. Where I have found it necessary to apply

the positive pole to the tumor, I dissolve a little soda or magnesia in the water. When applying the negative pole to the tumor I usually use a little lemon juice in the water. This I do for the purpose of neutralizing the acids or alkalies as they pass out of the system into the water, and thus prevent reaction.

Ques. How is a physician to determine whether a tumor or any other disease is the result of acids or alkalies?

Ans. The concentration of alkalies produces excitement, fever, and usually inflammation of the parts affected. Where the acids are concentrated, there will be found an enervated condition of the muscular or nervous action. The part affected is usually cold and clammy. It has been stated by Dr. Funke, "That the death of a muscle is marked by a progressive acidity and subsequent coagulation of the muscular plasma. The same is true of the nerve substance as well. If it is true that the death of a muscle or nerve commences when an acid condition sets in, it is also true that an inflamed or over-active condition is due to excessive alkalinity." These claims have been well established, by other authority and may be relied upon as scientific facts. No less authority than Dr. Neiswagner, of Chicago, Ill., when writing upon the

subject said, "Why is it when we place the positive pole over an inflamed or painful surface, that the inflammation and pain subsides? Oxygen is set free at the positive pole. Oxygen is an acid maker and the part in contact with the pole being changed to acidity, the temporary death of the part has commenced, or it is in a state of sedation, evinced by a circumscribed anaesthesia.

But what has become of the alkalinity that existed previous to the application of the positive pole? It certainly has not been neutralized by the acidity of that pole because that would necessitate the evolution of gas which has not taken place. Alkalies are electropositive substances, and have affinity for the negative pole; consequently the excess of alkali at the point of inflammation is transferred to the negative pole which immediately assumes a hyper-sensitive condition, proving that excess of alkalinity causes inflammation; because the part was perfectly normal before the application of the negative pole."

Ques. Would you consider it important for the practitioner to become acquainted with the physiological effects of the different poles before commencing to operate in Electro-Therapeutics?

Ans. Nothing can be more important.

BRIEF SUMMARY OF PHYSIOLOGICAL AND POLAR EFFECTS.

Dr. F. Martin of Chicago, summarizes the polar effects of the constant galvanic, and also, the primary faradic currents in gynecological work as follows: "The polar effects, employing a soft copper sound in one of the hollow organs of the body, such as uterus, and using for the active electrode, the positive pole, with a current varying from 10 to 25 ma. for each cm. of active surface; can be summarized as follows:

- (a) On local nerves, sedation.
- (b) On local blood vessels, vaso-constriction.
- (c) Result of electrolytic action, attraction of acid radicals of the disorganized tissues.
- (d) On local tissues, hardening from coagulation of albumen.
- (e) On pathogenic microbes, destruction.
- (f) On fluids in the tissue, propel toward opposite pole or cataphoric action.
- (g) Effect of electrolysis on copper electrode, acids of the tissues form copper salts which are driven into the tissues by cataphoresis.

For the negative pole:

- (a) On local nerves, irritation.
- (b) On local blood vessels, vaso-dilation.

(c) Result of electrolytic action, attraction of alkaline radicals of the disorganized tissues.

(d) On local tissues softening and liquefaction from effects of the alkaline.

(e) On pathogenic microbes-destruction.

(f) On fluids in the tissue, attracts them.

(g) Effect of electrolysis on copper or other metal electrodes, little or none.

The general systemic effect of the galvanic current applied equally to both poles.

(a) It is a powerful promoter of general nutrition.

(b) It is a powerful stimulant.

(c) Its inter-polar effect when powerfully concentrated is such as to promote absorption.

OBSTINATE MENSTRUATIONS.

Question—What would you consider the most effectual course to pursue in applying electricity for obstinate menstruation ?

Answer—First, investigate the case and find out the cause. If the cause is over mental taxation, as is often the case where young girls are ambitious students, our object should be to quiet the brain and stimulate the organs of the body, especially those of regeneration.

For the purpose a mild galvanic current from 6 to 10 volts may be used through the brain and body of the patient. Place the sponge electrode attached to the positive pole on the top of the head and the negative over the uterus. Move the positive electrode gradually down over the spine until it reaches a direct line with the negative. Care should be taken not to break the current by lifting the electrode from the surface of the skin during the passage.

The passage of the electrode should be very slow. This may be repeated three or four times, reversing the passage of the positive electrode without removing it from the skin of the patient, or lifting the negative from the abdomen. After this has been done three or four minutes place the positive electrode over the region of the kidneys and small of the back, with a vaginal electrode attached to the negative pole inserted into the vagina. Use a primary faradic current with one or two cells, as the patient may stand without the sensation of pain. Continue this treatment about once a day or at least four or five times a week, until the proper effect is produced, which seldom takes longer than from one to three weeks.

PAINFUL MENSTRUATION.

Ques.—What should be the method of treating dysmenorrhea ?

Ans.—Wherever there is inflammation or pain we must not forget that it is a condition which is always the result of abnormal stimulation, and to allay the pain we must apply the sedative (which is the positive pole) as near the seat of the pain as possible. Thus we may place the positive electrode in line with the ovaries over the abdomen, with the negative electrode in a warm foot bath in which the feet of the patient should be placed. Using the primary current until the pain is relieved ; then place the negative electrode on the small of the back and a cotton covered uterine electrode attached to the positive pole, inserted in the vagina against the mouth of the uterus. Use the straight galvanic current with sufficient strength to warm up the region of the negative pole as hot as the patient can stand it without pain or blistering. Say from 10 to 15 milliamperes. This treatment should be continued from 5 to 8 minutes. The above treatment would be of great value a few days before the regular periods.

ULCERATION OF THE UTERUS.

Ques.—What method would you use in treating ulceration of the uterus?

Ans.—First use an antiseptic douche; (a few drops of carbolic acid or boracic acid in warm water is good) then apply the positive electrode to the mouth of the uterus and the negative to the back just in line and above the uterus, using the straight galvanic current with 5 or 6 cells from 5 to 8 minutes. Then follow with the primary faradic current for about 3 or 4 minutes using the positive pole in the same position and the negative over the abdomen.

STRICTURES OF THE UTERUS.

Ques.—What method would you use in treating strictures of the uterus?

Ans.—In treating strictures of the uterus and also the urethra by electricity we must use similar methods, hence my answer will apply to both. Strictures, from whatever cause, must be dissolved, consequently their cure by electricity must be brought about either by electrolysis or cataphoresis. The straight galvanic current must be used to dissolve the stricture. For urethral strictures, the sound should be attached to the negative pole and

a sponge electrode applied to the perineum. For uterine strictures, the sponge electrode attached to the positive pole should be applied to the back opposite the uterus. The canal in either case may be speedily opened by the use of the sinusoidal or high tension current, with the application of the electrodes as stated above. But to render the opening of the passage permanent and to effect a cure, electrolysis of the abnormal growth must take place, and the undue centralization of electro-negative ions must be distributed. A little tincture of iodine applied by the use of urethral or uterine electrode will be found of great service in treating strictures.

In commenting upon the use of electricity in curing strictures, Dr. Martin of Chicago, has given us the following : " Strictures of the uterine canal are most often found at the external, or at the junction of the neck with the body. They result from inflammation of the endometrium, lacerations or other traumatisms, and from improper local treatment, or from improper surgery. Endometritis produces stricture of the uterine canal in much the same way that strictures of the uterus are produced by urethritis. Inflammatory action causes hypertrophy of the submucous and mucous tissues, which of necessity causes those tissues to encroach upon the

caliber of the canal. Cicatricial formations following lacerations or other traumatic injuries of the uterus frequently cause irregularities and contractions of the caliber of the uterine canal. Cauterizing of the uterine canal as a form of treatment has frequently produced strictures of that tube by cicatricial contractions, and also by the union of surfaces denuded by the caustic. Improper surgery, as too close closure of a laceration of the cervix, is an occasional cause of stricture of the external os. Thus the strictures are, strictly speaking, actual organic narrowings of the uterine canal, and are to be distinguished from constrictions caused by the flexing of a tube of normal caliber. In order to enlarge these strictures it is necessary to produce an absorption of the abnormal tissues which have encroached upon the tube. It will not do to cauterize a hole through, as that will destroy the integrity of the normal mucous membrane and leave a condition which in the end will aggravate the difficulty. Cutting the stricture does not insure against subsequent union and a continuance. Dilation, gradual or at one sitting, is usually followed by relapse. In the negative pole of the galvanic current, however, we get one of the most satisfactory remedies for strictures of the uterine canal. It produces absorption of the adventitious products

entering into the formation of the stricture without at the same time producing a corresponding destruction of normal tissue. It acts here as it acts in strictures of the urethra. It is painless, easy of employment, non-surgical in appearance, rational in its action and sure in its results."

STRENGTH OF CURRENT.

Ques. How many cells is it necessary to use to reduce a stricture, according to the method described above?

Ans. If using the alternating or interrupted current, from one to two cells will be all that is necessary. If using the straight galvanic current in the urethra, from 3 to 5, and in the uterus from 4 to 6 cells may be used. At no time should we use a current strong enough to cause an unpleasant, burning sensation.

Ques. Why do many authors and medical electricians advocate the use of such strong currents in gynecological work?

Ans. I know no well grounded reason for using strong currents except to overcome the electrolytic resistance and to cauterize. In electrolysis and cataphoresis we should never use a current, strong

enough to cauterize. As we have already stated electrolysis dissolves the electrolyte according to the proportion of its chemical equivalents. If in gynecological work we use a stronger current than is necessary to dissolve the tissue, instead of electrolysis we produce a form of cautery, which destroys the tissue without any respect to its chemical equivalents whatever. Many of our early advocates of the use of strong currents have seen their mistakes and are now employing milder forms.

After the resistance of the body is overcome, the surplus current for electrolysis and for general treatment need seldom measure more than 15 or 20 milliamperes, and in most cases from 5 to 10 milliamperes would be better; unless your aim is the destruction, or cauterization of tissue.

Perhaps one reason why medical electricians used stronger currents in former days, is the fact that the patient was almost invariably, commanded to hold one electrode in the hand, which brought a greater portion of the body in circuit than was often necessary. The body offers great resistance to the electric current, consequently the more of the body of the patient there is in circuit, the greater voltage will be required to overcome the resistance and to produce an effect. By short circuiting the body of

the patient, or bringing the electrodes nearer each other in operating, less voltage will be required and the result will be equal.

PROLAPSUS OF THE UTERUS.

(Falling of the Womb.)

Ques. How would you treat prolapsus?

Ans. Use a mild primary faradic current, with a cup shaped uterine electrode inserted in the vagina and placed against the mouth of the uterus; this electrode should be attached to the positive pole, and an abdominal electrode made of gauze wire, thinly covered with absorbent cotton about three by six inches in size, attached to the negative pole and placed on the abdomen just below the navel. The current should not be used strong enough to cause much contraction of the muscles in the region of the negative electrode. By using a large abdominal electrode much more volume of current may be used without any unpleasant contraction of the muscles, than could be used with small sponges.

ANTIVERSION OF THE UTERUS.

Ques. How would you treat antiversion of the uterus (tipping back)?

Ans. Antiversion may be treated somewhat similar to prolapsus; except that the negative electrode should be placed on the back just above the loins instead of over the abdomen.

RETROVERSION OF THE UTERUS.

(*Tipping Backward.*)

Ques. How would you treat retroversion of the uterus?

Ans. Retroversion should be treated the same as antiversion, except, that the electrode placed in the vagina should be attached to the negative pole of the battery and the electrode at the back should be attached to the positive pole.

ENLARGEMENT OF THE UTERUS.

Enlargement of the uterus should be treated first with the straight galvanic current. Applying the positive pole with a uterine electrode at the mouth of the uterus and the negative placed upon the spine in line with, but a little higher up than the

uterus. Using from 4 to 6 cells, as the patient can stand without feeling any unpleasant, burning sensation. This treatment may be continued from 5 to 8 minutes; then place the feet of the patient and the negative electrode in warm water and attach to the positive pole a cotton covered uterine electrode and apply to the mouth of the uterus. Use two cells with the primary faradic current from 3 to 5 minutes. After which remove the negative pole from the feet and pass it over the surface of the abdomen while the positive still is placed against the uterus.

INDURATION OF THE UTERUS

Induration of the uterus may be treated very much in the same manner as enlargement, except that the positive pole, or electrode should be placed against the uterus when using the straight galvanic current, and the electrode saturated with a very weak solution of iodine and water, say mix about 20 drops of iodine to a tumbler of water, in which the electrode is placed before using.

LEUCORRHEA (Whites)

The remedies for this trouble depend upon the cause. In some cases electricity is used with suc-

cess. Give the general tonic treatment daily with the alternating or secondary faradic current. The whole body should be treated, but give particular attention to the parts over the hips, and over the lower bowels.

I have sometimes had great success with using a good sized vaginal electrode covered with soft flannel, well moistened in a little tannic acid, borax or other astringent solution. The vaginal electrode should be attached to the negative pole as the acids will pass from the negative to the positive. The positive pole should be applied with a good sized electrode to the spine just above the kidneys. The straight galvanic current, with from 4 to 6 cells, or from 5 to 10 milliamperes, may be used for this mode of treatment.

TONIC FOR GENERAL DEBILITY

The symptoms that follow general debility in women are oft-times back aches, neurasthenia, insomnia, cold feet and hands, weakness and indisposition, with loss of appetite and a lack of power to assimilate what they eat, etc., etc. The best tonic in the use of electricity for the above conditions is the application of static, or of the sinusoidal current; either of these currents has a tendency to

stimulate and tone up the system without destruction of tissue or driving the nerve force out of the body of the patient. In using the static, the breeze current will be found the most effectual. In using the sinusoidal, one electrode should be attached to a foot plate and the other placed in the hands of the patient with a current strength, as high as the patient can stand without discomfort.

DISEASES OF THE URINARY ORGANS

The urinary organs are liable to many diseases, which may be produced by a variety of causes. In treating these diseases, it is essential, first, that the physician should somewhat understand the cause as well as the effect produced upon the organs or parts effected.

INFLAMMATION OF THE KIDNEYS

If the kidneys have become congested or inflamed by exposure to heats or colds, which have checked the perspiration, thus increasing the excitement and labors of these organs, causing them to become incapable of performing their proper secretory functions, the straight galvanic current will be found to be of great value in treating them.

Place an ordinary sponge or cotton covered electrode, attached to the positive pole, over the kidneys, whilst the negative electrode and the feet of the patient should be immersed in tepid water. This treatment may be continued for five or six minutes, with from six to eight cells or ten or twenty milliamperes. After which let the electrodes remain the same and with two cells attached to the primary, faradic current, continue the treatment from three to five minutes pulling out the rheotome or slide in the center of the coil, thus increasing the strength of the current ; but sufficient strength should never be used to cause any unpleasant sensation to the patient.

PARALYSIS OF THE KIDNEYS.

If it be determined that there is paralysis of the kidneys, and instead of being sensitive, painful and inflamed, they refuse to act, and as a result the blood becomes uraemic, oft-times causing nausea, vomiting, headache, dimness of vision, convulsions, stupor or coma, etc., any or all of which oft-times follow this condition of the kidneys, the treatment should be somewhat reversed from that given above in the treatment of inflammation. In paralysis of the kidneys the negative electrode

should be applied over the kidneys and the positive to the feet in water. A little magnesia or sodium of some kind should be dissolved in the water in which the feet and the positive pole are immersed; as the acids from the blood will be attracted to the positive pole, and the sodium in the water will neutralize the same and thus prevent their return to the body of the patient. Use the straight galvanic current with from 15 to 25 milliamperes. Continue the current from about five to eight minutes; then change to the high tension faradic current or the sinusoidal for about five minutes more. The above treatment should be given at least once a day until the symptoms are changed and the passage and analysis of the urine prove that the kidneys have begun to perform their normal functions. Where the disease is not of long standing, this change is often brought about in from one to two months. Where the disease is of long standing, and has become chronic, a much longer time will be required to make the treatment a success.

In all stages of kidney trouble from nephritis to what is known as Bright's Disease, a general treatment of the spine, liver and abdomen, with the sinusoidal, or high tension faradic current, will be found to be of great service in causing the liver to secrete and the bowels to operate and throw off the poison from the system.

DISEASES OF THE BLADDER.

Urinary troubles often arise from an inflamed or irritated condition of the neck of the bladder, or from a stricture of the urethra. Where it is caused by inflammation, there is usually an irritated condition. The symptoms of which, in grown persons, is to pass water with unusual frequency, day or night; there is also manifested pain or soreness around the neck of the bladder, a burning sensation in the urethra and mucous membrane when urinating. This inflammation may often be allayed by the use of the faradic current, placing the positive pole over the neck of the bladder and the negative pole at the feet, using a very mild secondary current.

In adults, where the trouble is caused by spinal irritation, hysteria, etc., a stronger current may be used by placing the negative pole at the top of the spine and the positive over the abdomen and bladder. Where the trouble is simply local, give only local treatment.

Similar treatments may be applied to children, only milder currents should be used.

RETENTION OF THE URINE.

Retention of the urine, occurring in hysterical persons, may oft-times be improved by using the negative pole and the straight galvanic current over the neck of the bladder, or an electric catheter inserted into the mouth of the urethra, while the positive pole is applied with a sponge or cotton covered electrode to the spine in the region of the kidneys.

This treatment should consist in the use of five or six cells or from 10 to 15 milliamperes, for about five minutes at a time : to be followed with the primary faradic current, consisting of 1 to 2 cells, as the patient can bear without suffering. The latter treatment should be continued for from three to five minutes.

ENLARGED PROSTATE GLAND.

From whatever cause this trouble may arise, the straight galvanic current will be found most effectual. The method of applying the treatment should be similar to that used in reducing strictures of the urethra.

Place the positive electrode at the perineum with a sound attached to the negative pole, inserted into the urethra. Pass the sound up until it comes in

contact with the prostrate gland, then turn on about 3 or 4 cells or from 5 to 8 milliamperes. If the positive electrode, which is placed at the perineum, be saturated with a solution of Rochelle salts, or citrate or sulphate or magnesia, it will often hasten the reduction of the prostate gland. Sometimes a solution of iodine injected into the urethra, before inserting the negative pole, will assist in softening up the stricture.

I have found the use of the sinusoidal current to be of great value in reducing strictures and enlarged prostrate.

DISEASES OF THE RECTUM, LIVER, STOMACH, ETC.

The lower portion of the rectum is composed of thick, strong coats of muscular fibre and is lined with mucous membrane containing numerous arteries and veins, forming an intricate net work near the lower end, called the hemorrhoidal plexus. When these blood vessels become enlarged they produce that painful disease known as hemorrhoids or piles. There are two varieties, to which we may call attention, namely external and internal. External when they are situated outside of the sphincter muscle, which closes the mouth of the bowel,

and when they are situated inside the mouth of the bowel, they are called internal piles. In many instances both varieties may be found to exist in the same person. The presence of hemorrhoids usually indicates that there is a disease of the liver or some other interior organ of the body, which retards the return of the blood from the lower bowels to the heart and lungs.

Ques.—How would you treat hemorrhoids or piles?

Ans.—In all cases of piles the straight galvanic current will be found to be of great value. For internal piles, use a small rectal electrode attached to the positive pole, inserted into the rectum, whilst the negative pole should be placed to the spine just above the kidneys. Use from 4 to 6 cells or from 10 to 15 milliamperes. A little tincture of iodine in water may be used to moisten the rectal electrode. Care should be taken not to use too strong a current, as it would tend to cauterize and destroy, rather than to decompose the tissue. For external piles a little sponge electrode may be used at the mouth of the rectum with the positive pole, instead of a rectal electrode placed into the rectum. The sinusoidal current will also be found very beneficial, applied as directed, with the rectal electrode placed into the rectum, and the positive placed over the

region of the liver. A treatment may be continued from five to eight minutes with the straight galvanic or from five to ten minutes with the sinusoidal. The ordinary faradic current does not seem to be of much value in treating this disease.

CONSTIPATION OF THE BOWELS.

I have found good results in treating this disease with the straight galvanic current, by placing a rectal electrode attached to the negative pole about three or four inches into the rectum, whilst the positive electrode may be placed over the stomach or liver. Turn on about 6 cells or 15 milliamperes. Use the straight galvanic current for about five minutes at a time, then turn off this current and with 1 or 2 cells apply the sinusoidal or the high tension faradic current for about five minutes more. The high tension faradic current alone, applied as directed above, will be found of great value in treating for constipation.

INFLAMMATION OF THE BOWELS.

In treating inflammation of the bowels we should use a sedative. For this purpose the positive pole

of the straight galvanic current should be applied over the liver, with the negative at the feet or bottom of the spine. The sinusoidal current will be found to be of great value in treating inflammation of all kinds, as it has both a sedative as well as a stimulating effect upon the constitution, from the fact that it balances the positive and negative elements. Its effect will be found to be a sedative and a stimulant in proportion to the nature of the disease, for which it is used. If there is inflammation and congestion, the sinusoidal current being a distributing current, will remove the congestion. In cases of paralysis or debility it will have the same balancing tendency and will promote stimulation.

Ques.—How would you treat inflammation of the liver?

Ans.—Inflammation of the liver should be treated similar to that given for the bowels ; for all inflammatory troubles we should use a sedative or a balancing current. (See inflammation of the bowels).

TORPID LIVER.

Wherever there is functional inactivity, it requires stimulation. Hence, the high tension faradic or sinusoidal current will be found of great value

in treatment of torpid liver. Apply one electrode to the feet and the other to the stomach or liver, and across the surface of the lower bowels, using a current of as much intensity and volume as the patient can stand. Continue this treatment from five to eight minutes. The straight galvanic current is often used where stimulation is required. Place the negative pole electrode on the part to be stimulated, with the positive attached to a foot plate, having the feet and positive electrode in water. Turn on as many cells as the patient can stand without producing too much heat at the negative pole. About 30 or 40 milliamperes may be used in this treatment.

INDIGESTION.

As indigestion is often produced by the inactivity of the liver or other secretory glands, a general tonic will be found to be of importance for such purposes. The whole system should be treated by placing the negative electrode at the top of the spine, just above and between the shoulders, with the positive at the feet. Use a primary faradic or sinusoidal current, with as much volume as the patient can stand. Treat for five minutes, then localize your treatment for another five minutes, by

applying the negative pole over stomach, liver and gall; the positive pole remaining in the position before mentioned. These treatments should be applied every day until relief is given, which sometimes takes from four to six days before the stomach begins to perform its normal function, after which two or three treatments a week will be sufficient to affect a cure; which usually takes place in one or two months.

Proper attention must be paid to diet and the regulation of the bowels by the methods used in treating constipation, as given above.

CRAMPS.

Cramps being spasmodic muscular contractions whether they affect the stomach, limbs, or other parts of the body, they should be treated by means of stimulation; hence, a straight galvanic current with the positive electrode placed at the feet, or taken in the hands, with the negative electrode applied to the diseased part. Sufficient strength of current should be used to warm up the parts affected. The sinusoidal current should be used for a few minutes to balance up the circulation.

CONSUMPTION.

Although this terrible disease is estimated to destroy not less than one hundred thousand human beings in the United States in a year, yet it is a fact which is conceded by many of our leading physicians, who have made a test of the use of electricity, that in the majority of cases, if taken in their early stages, they are amenable to electricity.

In consumption tubercular deposits are formed in all the tissues and the cavity of the air cells, filling them with imperfectly formed blood cells. The quickest and most direct method of removing these imperfect cells and substituting new and healthy tissue, is most desirable. Nothing will do this as efficiently as the electrolytic and cataphoric application of the straight galvanic current. Place the positive electrode on the back at the base of the lung affected and the hands of the patient in water in which is also embedded the negative electrode. If it is necessary to treat both lungs, move the positive electrode across from one lung to the other without lifting it from the surface.

Use from five to six cells or from ten to fifteen milliamperes. Let the treatment last about ten minutes each day. Where medicaments are used, they should be applied to the positive electrode.

PNEUMONIA.

Ques. How would you treat pneumonia?

Ans. In treating severe cases of pneumonia, I should regard the sinusoidal or alternating current to be of more importance than any other current in electricity. The principal object of treatment is to subdue the inflammation and congestion, to open up the air cells and restore normal circulation and respiration.

Apply one electrode to the chest a little to the right of the pit of the stomach and the other to the back, right under the shoulder blade, so as to bring the whole length of the lung in circuit. Use as high tension as the patient can stand without suffering. Care should be taken not to apply the electrode too near the heart.

I have also found the secondary faradic current to be of great service in treating pneumonia.

BRONCHITIS.

Ques. How would you treat bronchitis?

Ans. The treatment of bronchitis should be similar to that given for pneumonia. The straight galvanic current is often used to great advantage in this treatment by placing a good sized negative

electrode over the bronchial tubes and the positive electrode at the top of the spine; thus short circuiting the part affected. This often produces a relaxing tendency.

COUGHS, COLDS, ETC.

Coughs and colds should be treated similarly to bronchitis. Where the cold has settled upon the chest and there is great tightness of the chest and air cells, which makes breathing difficult, place the positive electrode at the back of the lungs and the negative electrode just over the pit of the stomach. Use the straight galvanic current with from four to six cells or from ten to fifteen milliamperes. This treatment should be continued for about five minutes, after which turn on the high tension faradic or sinusoidal current. The sinusoidal will give relief much sooner than any other current.

In using the high tension faradic current, place the positive electrode over the chest, avoiding too close proximity to the heart. Place the negative electrode in the hands or at the feet. The sinusoidal should be applied in the same manner as the high tension faradic. With either of the latter currents, the application should not be more than from three to five minutes.

SORE THROAT.

In inflammatory sore throat, use a copper electrode attached to the position pole and inserted in the mouth against the palate, with the negative sponge electrode in the hands of the patient, using the straight galvanic current, with four or five cells, or from five to ten milliamperes. The above current, because of its astringent tendencies, will be found to be very effectual in allaying inflammation of the mucous membrane.

After treating with the galvanic current, use a mild primary faradic current, with the positive sponge electrode outside of the throat and just at the top of the chest and the negative electrode at the nape of the neck for about five minutes.

Ulcerated sore throat may be treated similarly to inflammatory sore throat.

CATARRH OF THE HEAD AND THROAT.

Catarrh, whether found in the head, throat, or any other part of the body, is the result of the inflammation of the mucous membranes or linings of the system. Its cause may be found to be the result of the inactivity of the liver or kidneys causing the accumulation of bile and an acidulous condition of the blood. Hence, it is not enough to

apply electricity to the part affected, but the cause must be removed by a general toning up of the system and especially by exciting the action of the liver. For catarrh of the head and throat, a local application may be as follows: place the positive electrode at the root of the nose and the negative at the top of the spine, using a very mild galvanic current, with from four to six cells or five to ten milliamperes. Continue this contact for about three or five minutes, then place the negative electrode at the bottom of the spine with the positive electrode against the throat, using the same current for about three or four minutes longer. After this, use the sinusoidal, or the high tension faradic current, with the negative electrode embedded in water, with the feet of the patient and with the positive electrode, sponge the back of the liver, spine and kidneys.

HEADACHE.

In treating headache, we should first determine its cause and nature. If it is what is known as sick headache, resulting from a bilious condition, then we should place the positive electrode at the feet or in the hands of the patient, and with the negative electrode, sponge the liver, using the

secondary faradic current or the sinusoidal, with as high tension as the patient can stand without contracting the muscles.

In treating nervous headache, we should first find the cause. If it is the result of over mental exertion, where the blood is unduly centered upon the brain, causing temporary inflammation; place the feet of the patient in water in which the negative electrode is embedded, and the other in the hands of the patient, using a mild secondary faradic current sufficiently long to call the blood from the brain and balance the circulation of the system. The sinusoidal current may be used in preference to the faradic.

If it be found that nervous headache is periodical and is the result of a local trouble, as is often found in females, then the positive electrode should be applied over the region of the ovaries and uterus, with the negative electrode at the perineum. Use similar currents to those that have been given for nervous headache.

EARACHE OR MYRINGITIS.

For earache, apply the positive electrode to the back of the ear affected, and if it is the left ear, place the negative electrode in the right hand of

the patient, and *vice versa*. Apply a mild primary faradic current until relief is obtained, which generally takes about five or ten minutes.

DEAFNESS.

In treating deafness, care should be taken first to syringe the ear and remove all foreign matter, such as wax, etc. If the wax has become hard, use the straight galvanic current with the ear electrode attached to the negative pole and the positive electrode in the hands of the patient. Turn on about six cells, or from ten to fifteen or twenty milliamperes, according as the patient can bear. This will have a tendency to warm up and soften the wax, as well as to stimulate the mucous membranes. Where the drum of the ear has been destroyed, electricity or any other kind of treatment will be found to be of very little value.

INFLAMMATION AND NERVOUS AFFECTIONS OF THE EYES.

In treating inflammation of the eyes, whether confined to the eyelids, eye-balls or optic nerve, the mild primary faradic current will be found to be of

great value by placing small disk sponges attached to the positive pole over the eyelids and the negative electrode at the nape of the neck. Treat for about ten minutes each day, until the inflammation has been removed.

The above treatment will also apply to granulation of the lids.

SPASMS AND PTOSIS OF THE EYELIDS.

For these affections of the eyelids, the sinusoidal current will be found to be of great service. Use two sponge or cotton covered electrodes; placing one over each eyelid. Use a very mild current. Where the sinusoidal current is not available, the high tension faradic current may be used instead, but not with equal success. In using the high tension faradic current, treat one eye at a time with the negative electrode over the eyelid and the positive at the nape of the neck. A mild current should be used at all times.

TREATMENT OF THE SCALP. TO REMOVE DANDRUFF.

Use the straight galvanic current with a hair-brush electrode attached to the negative pole and

the positive electrode in the hand of the patient. Use about six cells, moving the brush over the scalp without breaking the current for about two or three minutes, then for two or three minutes continue to brush the head breaking the current at the end of each movement; thus brushing out the dandruff that has been loosened from the scalp. This treatment will be found more effectual than any other in treating eczema.

FALLING OF THE HAIR.

For falling of the hair, similar treatment should be given as to that which we have described for dandruff and eczema, to be followed with a mild faradic or sinusoidal current as a stimulant and tonic for the scalp.

FEVERS.

To use electricity successfully in the early stages of all fevers, I have found the best method to be the electric bath; inasmuch as the pores of the skin have become closed and the surface dry, the most important part of any treatment will be its tendency to open up the pores of the skin and bring the surplus heat of the body to the surface. For

this purpose I use the alternating or sinusoidal current with one pole attached to a foot plate which has been embedded in the water ; but if it be a metal bath tub, it can be fastened to the tub. The other electrode will be held in the hands of the patient, who will be allowed to lie down in the water, which has been heated to a blood heat. Then turn on as much current as the patient can stand and continue until the perspiration manifests itself on the surface of the face and parts that are not immersed. After which the patient should be rubbed thoroughly dry with coarse towels, then covered up warmly in a blanket. In my own experience I have found that in nine cases out of ten, within a few hours the fever has been broken up and the patient has recovered.

Where the sinusoidal or alternating current is not available, use the high tension faradic in its place, with the negative electrode in the hands of the patient and the positive embedded in the water.

INSOMNIA.

If the patient is naturally debilitated from any cause, place the feet in warm water in which is embedded the negative electrode and the positive should be placed at the top of the spine. Use

a mild secondary faradic current; where the sinusoidal is available it may be used in place of the faradic. This treatment should be given just before retiring and should last about ten minutes.

If the patient is very nervous give the general tonic treatment given on another page.

The above treatment will also be found to be of great value in cases of nervous troubles, melancholia, epilepsy and St. Vitus dance.

RHEUMATISM.

Inflammatory rheumatism is usually the result of uric acid in the blood. Our first object should be to remove the acid from the system as far as possible. This may be done by placing the positive electrode and the feet of the patient in warm water in which is dissolved some form of alkali, such as Rochelle salts, magnesia or bi-carbonate of soda. The negative electrode of a straight galvanic battery should be applied to the seat of pain. Use about six cells or from fifteen to twenty milliamperes and treat for ten minutes at a time.

If it be found that the trouble arises from exposure of any kind, such as draughts, standing in water or in wet clothes, then the faradic or sinusoidal current may be applied. Using the posi-

tive electrode at the top of the spine and the negative at the feet. If the disease is localized, such as rheumatism of the arm, shoulder, or in the joints or lower limbs or any other part of the lower limbs, then the positive electrode should be applied to the seat of pain with the negative at the extremity of the part affected.

If the disease has been of long standing and is attended with contortions of the muscles or stiffness of the joints, it should receive both the galvanic and faradic treatments and will take a longer course of treatments in order to affect a cure; but the sufferings are often greatly relieved in all forms of rheumatism after a few applications of electricity.

NEURALGIA.

In treating neuralgia we should observe similar rules to those given for the treatment of rheumatism but it being an excited condition of the nerves affected, the positive electrode being a sedative should always be applied at the seat of distress and the negative electrode at the nearest extremity. For instance, if it be in the face, apply the positive electrode to the pain and the negative in the hand. If it be in the stomach, apply the positive electrode to the stomach and the negative to the feet.

PARALYSIS.

Paralysis being a debilitated condition of the nerves and lack of sensation, what is necessary is to stimulate. In all cases of paralysis, paresis, etc., the straight galvanic current is the most effectual. If the lower limbs are affected, place the positive electrode at the feet and the negative electrode at the top of the spine. If it be the result of a hemorrhage on the brain, then the positive electrode should be placed to the lobe of the brain affected and the negative electrode at the feet.

SPINAL MENINGITIS.

Spinal Meningitis, like all other forms of inflammation, must be treated by an application of the sedative pole. With a very mild straight galvanic current, apply the positive electrode to the top of the head with the negative electrode at the base of the spine. Sponge gradually from the head up and down over the spine without breaking the current. From five to ten milliamperes or five to six cells should be used. Care should be taken not to use too strong a current as in this trouble, very little surplus current is necessary after overcoming the resistance of the body. Sometimes the static

breeze is used with good results in treating this spinal affection.

LOCK JAW.

Place the negative electrode of a straight galvanic current just over the contracted muscles and the positive electrode in the hand of the patient. Use from fifteen to twenty milliamperes for three to five minutes. A good strong sinusoidal current will be found the most effectual in relaxing the muscles and curing the lockjaw. Use the electrodes as given in the use of the galvanic current.

ENLARGEMENT OF THE SPLEEN AND LIVER.

Enlargement of the spleen and liver should be treated by electrolysis or cataphoresis. In treating cataphorically, saturate a piece of blotting paper or absorbent cotton with a little iodine and attach to the positive electrode of a straight galvanic battery. Place it over the liver or spleen, with the negative electrode on the back opposite, leaving the organ in circuit between the two electrodes. Use from twenty to thirty milliamperes. The sinusoidal may be used with good results in reducing an

enlargement of the spleen or liver by placing one electrode over the organ affected and the feet of the patient in water in which the other electrode is embedded. Turn on as strong a current as the patient can stand. Sponge the electrode over the organ affected from the front to the back.

ELECTRIC MASSAGE.

For the Face and Complexion.

For stimulating the skin and beautifying the complexion, a small electric roller or a fine wire bristled brush will be found most effectual. For this purpose the straight galvanic current, with the roller or brush attached to the negative pole should be applied to the face, while the patient holds the positive electrode in the hand. A mild current, say from four to six cells or from five to ten milliamperes will be sufficient. This application will be found to be especially useful in removing wrinkles, as well as giving firmness and rounding out the muscles of the face. Care should be taken to roll or brush lengthwise with the wrinkles. In treating the muscles begin with the chin and move upward over the face.

MASSAGING THE BODY.

To Reduce Flesh.

To reduce flesh, place the feet in water in which is embedded the negative electrode, having the positive attached to a good-sized roller, either metal studded or flannel covered (well moistened). Use the straight galvanic current. A little sodium, magnesia or Rochelle salts may be used in the water with which the roller is moistened ; also place in the water with the feet. A good strong current, from 20 to 30 milliamperes may be used. After the above treatment is given, which should consist of a period of 10 or 15 minutes at a time, the high tension faradic or sinusoidal may be used from three to five minutes to tone up the patient, as the straight galvanic current used in the manner above described is a destructive current and might tend to exhaustion.

To Produce Flesh.

In treating the body to develope and round out the muscles and give firmness to the flesh, treat as in reduction, except that the electrodes should be reversed.

USE OF ELECTRICITY IN DENTISTRY.

Cataphoresis.

Saturate a small piece of cotton with 15 to 20 per cent. solution of cocaine and place in the cavity of the tooth (having the needle electrode attached to the positive post of the battery), place the point of the needle or platinum wire on to the cotton and with the other sponge electrode attached to the negative binding post of the battery, place the sponge on the zygomatic arch of the patient when working with the upper teeth, and to the dental nerve if working with the lower, thus short circuiting with from three to four cells, according to what the patient can stand without suffering, the desired effect will be produced in from three to five minutes. This method of short circuiting, or placing the electrodes as near each other as convenient, should be observed in all cataphoric operations.

GENERAL DIRECTIONS.

Electrodes.

See that the sponge or cotton electrodes are well moistened, so that the current may be carried from the metal contact inside to the surface. Oft-times

where the sponge or cotton is moistened only on the surface, the contact is so poor that very little current is felt by the patient, as moisture is a conductor of the current of electricity, less E. M. F. (electro-motive force) will be required where the electrodes are well moistened, and the generative power of the machine will consequently be lengthened.

ELECTROLYSIS.

In all electrolytic work, very little more current than is necessary to overcome the resistance of the body should be used, as strong currents have a tendency to destroy, rather than decompose tissues.

TONIC TREATMENT.

In tonic treatment the sinusoidal current or static breeze, will be found to be most effectual. The whole body of the patient should be brought in circuit.

STRENGTH OF THE CURRENT.

In using either the galvanic, faradic or sinusoidal current, the strength of the current may be increased or diminished not only by having more

cells, shifting the slide in the faradic coil, etc., but also in its application to the body its intensity may be lessened and its volume increased by the size of the electrodes used. Where the disease is deep seated and a strong current is necessary, a large electrode covering considerable area, applied to the diseased part, especially in cases of inflammation, will lessen the intensity, even when greater volume is used.

Uses of The Slow Interruptor.

The slow interruptor will be of great value in diagnosing, massaging and stimulating inert muscles. By the use of a slow interruptor we can reach deep seated muscular troubles in cases where rapid vibrations have little or no effect. Muscular Rheumatism, Lumbago, Sciatica, etc. are among the diseases which may be treated successfully by the use of the slow interruptor. The slow interruptor may be used effectually in curing Constipation. For this purpose, attach the two sponge electrodes to the 1st and 3rd faradic posts; switch the contact screw on to the slow vibrator and adjust the screws until you have from 90 to 100 vibrations per minute: have the cotton or sponge electrodes thoroughly wet; pass them over the abdominal wall in the direction of the Colon, keeping the sponges about three or four inches apart; use from 2 to 4 cells as the patient can stand without suffering from too severe muscular contractions. Continue the above treatment for about 4 or 5 minutes. After which place the positive electrode over the liver and the negative move over the abdomine. Let the later treatment continue for about 2 or 3 minutes. The above treatment should be given daily until the

bowels begin to operate regularly, which often occurs in from 3 to 5 days; in chronic cases it sometimes takes from 8 to 10 days. When the bowels begin to act natural the treatment should be given about 3 or 4 times a week for 2 or 3 weeks more. The patient should be advised to drink cold water freely during the day and especially at bed time. No other laxative should be used.

Uses of The Sinusoidal Current.

The subduing and quieting effects of the sinusoidal current upon the patients suffering from Neurosis, and its stimulating effects in cases of Neurasthenia is oftentimes considered marvelous. Unlike the straight galvanic or the faradic current (which has a polar influence sufficient to produce an electrolytic and cathodic effect upon the alkaloids, salts and acids of the system, by first dissolving according to the elementary constituents of the electrolyte (or body) and then attracting or repelling these "ions" to the different poles according to their affinity) the rapid change of polarity, brought about by the alternator, prevents these polar effects with the sinusoidal current, and instead of centralizing the positive and negative "ions" (which often causes undue stimulation on the one

hand or a debilitating effect on the other) it simply mixes, neutralizes and balances the circulation, which brings about a normal condition in the body of the patient without the possibility of any undue excitement or depression; (being in itself both a sedative and a stimulant.)

Another great advantage in the use of the sinuoidal over the straight current, lies in the fact, that no mistake can be made by the physician using it. Whether the disease has been correctly diagnosed according to its elementary conditions or not, or whether the physician has been schooled in the physiology and polar effects of electricity sufficient to determine the adaptability of the positive and negative poles in using electricity as a therapeutic agent or not, there is no danger of his applying the positive pole (or electrode) where he should place the negative; as has often been done in the use of the straight galvanic and faradic currents. Failures and disastrous results in the use of electricity by physicians almost invariably may be traced to the want of knowledge of polar effects. Thus it is, that a great many physicians (who have made failures) have become discouraged, and if they have not condemned its use they have become

altogether indifferent to the subject of electricity. Yet after trying the use of the sinusoidal, and finding good results they have become enthusiasts upon the subject. Then looking carefully into the physiology and chemical effects of the different poles, they have discovered that there is an affinity between the chemical action of the different poles of an electric battery upon an electrolyte or conductor and the great nerve force of the human body, acting upon blood and muscle, which constitutes the electrolyte or conductors for the electric forces of brain and mind. Thus we are coming to an age when the use of electricity will take its stand as foremost among the methods used as a remedial agent; second only to the practice of Surgery alone.

Another feature of the sinusoidal current which renders it valuable (especially in nervous troubles) lies in the fact, that while its electro-motor force is increased by the high tension coil its amperage is lessened by the magnetic flux generated in the coil, thus producing a static effect upon the patient; where a great deal of volume is used with but little intensity.

Suggestive Therapeutics.



CHAPTER I.

SUSPENSION OF SENSATION.

From careful investigation of the relation between mind and matter, the law of assimilation and the positive and negative relation of parts reigning through every part of the entire universe, it seems to me we are forced to the conclusion that all nature is a unit ; that there is but one law by which it is controlled, and as such, but one absolute cause of health and disease.

This cause is the disturbing of the electric fluid, throwing out of balance the positive and negative elements of matter.

Disease of the human body is brought about by the same law and similar conditions to that which causes the eruptions of the earth, the vomiting of the volcano, the concentration and expansion of substances, the atmospheric disturbances, together with its feverish and chilling temperature. Disease simply means a lack of harmony between the positive and negative forces of nature.

If we can learn the absolute cause of disturbance in one, we have the key to every part of nature whether it be mineral, vegetable or animal. The next thought that suggests itself for our consideration is, that the disturbance of matter begins in the finest and ends in the coarsest form of organism. If we go backward with our thoughts to that period in duration when worlds were not, when all things that now are, were wrapped in the darkness of primeval night ; if we contemplate upon the invisible forms of original matter that slumbered in the deep bosom of chaos , and of all tangible substance, from the grain of sand to the rolling worlds; we shall find that that original something which could neither be measured, weighed or handled was nothing more or less than electricity.

Hence, electricity is not only the stimulator, but the formulator, the life-giving principle, the everlasting fountain of every form of the material universe. If man is an epitome of the universe, the same chemical properties of all the various substances in existence, together with their exact proportions, are congregated and centralized in the form and elementaries of his being. In the composition of his body are involved all the mineral and vegetable substances of the globe, from the coarsest matter up to the most rarified and fine. To

which, we may remark, there is added a conscious, controlling ego, or spirit, which like an enthroned deity, presides over and governs through electricity all the voluntary motions of this organized miniature universe ; and by its living presence and power causes all the involuntary functions of life to proceed in their destined course. Hence, human beings together with all animated existences are subject to the same electrical law that permeates the universe and moves all worlds. Electricity is the connecting link between mind and matter and is co-eternal with spirit. It undoubtedly is the only substance that spirit or mind can come in direct contact with and through which mind or spirit can demonstrate its powers. Electricity is the servant of mind, to execute its will and control matter. It contracts the muscles, expands the chest, causes the circulation of the blood, generates thought and gives expression to the will and all voluntary and involuntary motions of our entire being. Yet the power which generates this subtle force we call mind. Mind is the only substance in the universe to which we ascribe the possession of inherent motion, hence, so far as we know, mind is the first grand moving cause. The mind wills and stirs the nervous fluid, which is electricity. This electricity causes the nerves to vibrate, which vibration of the

nerves causes the contraction of the fiber of the muscles ; the contraction of the muscles raises the bone of the arm and the arm raises dead matter. Thus we perceive the volition of the human mind throwing off electricity and working through its own physical organism, demonstrating its power over independent matter.

But some one may ask, "How is this power to be maintained? From whence comes this electro-nervous fluid?" To which we answer that so far as man knows, it has its origin in the atmosphere. It is taken into the blood by the respiratory organs at the lungs, from the blood it is thrown into the nerves and carried to the brain, where it is stored up and prepared for the use of the mind. The brain being the organ of the mind, it is the fountain of electro-nervous fluid.

Between the upper brain or what is known as the cerebrum (which is the seat of consciousness), and the nerves of sensation, the laws of reciprocity are such that whatever affects one proportionately affects the other. While we believe that organic diseases or physical injuries can best be remedied by adherence to the laws of physics, or in other words the reconstruction of physical tissue, bone or muscle can only be brought about by the application and assimilation of the material elementaries

which constitute the nature of the compound which has been destroyed. Yet we must not overlook the fact that suffering which is dependent upon consciousness, can be greatly relieved, if not set aside by suggestion.

This point of our subject is one that is exciting more attention and creating more interest among materialistic scientists than any other branch of hypnotic phenomena. It is not an uncommon thing for a hypnotist to so control his subjects as to render them unconscious of suffering while their teeth are being extracted, a finger or a limb is being amputated or any other surgical operation is being performed upon their bodies. Wherever this phenomenon takes place without physical contact between the subject and operator, it is invariably done through what we call suggestion, which renders the mind of the subject sufficiently positive either to balance the circulating fluids of their own physical system, or to call off their attention from the condition of their nerves and concentrate it upon some other subject, so as to be forgetful of their own ailments. As an explanation, confirmation and illustration of this part of our subject I shall introduce a few incidents which will undoubtedly correspond with the experiences of almost everyone who have either been the subjects to, or witnesses of, the conditions of pain.

Some years ago when in the city of Harrisburg, Pa., I was sitting in the parlor of one of the hotels in conversation with a friend, when a young lady entered and took a seat opposite to where we were sitting. I noticed she had something tied around her face and was evidently suffering great pain. I politely asked her the nature of her distress, when she replied that she was suffering from "severe toothache." I asked her if I should stop it. She naturally asked me, by what means I would do it. I told her, "By Magnetism." With this remark, I arose from my seat to move toward her, when in an excited manner she exclaimed: "You are Prof. Seymour, the hypnotist! Keep away from me! I would rather have the tooth ache than have you near me." I was satisfied that the suggestion had done its work and that from the positive condition of her mind there was no further consciousness of pain. I at once took my seat with the remark: "Your pain has left you." She hesitated a moment, sucked her tooth, then exclaimed in astonishment, "It has stopped aching. How did you do it?" I told her that I did it by hypnotism. The truth was that the positive condition of her own mind called forth such a rush of electricity to the nerves of her face, that it removed all obstructions to the nervous circulation, balanced the positive

and negative conditions of the nerves, and both cause and effect of "toothache" were at once removed.

Another illustration, and one which perhaps is more likely to come under the notice of people in general, is as follows: after considerable hesitation, a very sensitive or nervous person, makes up his mind to go to the dentist to have a tooth extracted; while on the way, the thought of having the tooth extracted is uppermost in his mind, and if he has ever been to a dentist before and experienced a great degree of pain, he naturally dwells upon the imaginary pain of extracting the next. This thought becomes more positive in his mind than the pain he is already enduring; consequently, the nerve responds to the most positive idea of the mind, which is the ideal pain. The real pain in the tooth is lost in the prospect of one that is greater. Thus we find a great many persons turn back when near the dentist's door, because of lack of courage to have a tooth extracted when it does not ache.

This fully illustrates the fact that our sensations are the result of our consciousness; and that there is no pain where there is no consciousness.

It is recorded of the great statesman, Henry Clay, on one occasion, when very much indisposed and

rather unable to speak, that a gentleman on the floor in the House of Congress, made a severe personal attack upon him. Mr. Clay whispered to a gentleman who sat next him and said :

“I must answer him, but I beg of you not to let me speak over half an hour.”

Mr. Clay commenced and was soon on wing soaring higher and higher in his sublime eloquence, and pouring forth language like the thunderbolts of heaven, in the defence of his own manhood. He became fascinated with the subject of his own defense, until he fully forgot his indisposition. His half hour expired and the gentleman by his side pulled his coat, but Clay paid no attention to the signal. He kicked his limbs, but it made no impression. He ran a pin several times half its length into the calves of his legs. Clay heeded it not ; spoke two hours, sank exhausted into his seat and rebuked the other gentleman for not stopping him. He had felt nothing. The concentration of mind had called the electricity of his system to his brain, and he threw it off by mental effort, and in proportion as sensation was called to the brain, the limbs were robbed.

I might cite an illustration which took place in the city of Toronto, on the 14th day of December, 1888. Dr. J. Hunter Emory, who then resided at

33 Richmond St., invited me to his office to try an experiment upon a gentleman by the name of Charles Armstrong, who lived at 247 Spadina Ave. The operation to be performed was the amputation of a finger. I went to the doctor's office at the time appointed, was introduced to the patient, and the object of my presence was made known. Mr. Armstrong stated that he objected to taking ether, and was willing that I should try my power of magnetizing the arm; but at the same time he said he had but little confidence in my success, as he had been tried by several professional mesmerists and had never been controlled. I told him I did not intend to mesmerize him, but simply intended to so control the circulation of the blood and nerve fluid, as to prevent his suffering. When he had seated himself in the chair, and the doctor was ready, I commenced with the fingers, in the fullest assurance of mind that the blood in his hand would recede back into his arm, as I drew my hand clear back over the arm to the shoulder, when I told the doctor that I was ready. I then placed my right hand upon the patient's forehead, with my left hand just back of the hand that was being cut. The finger was taken off. The patient was conscious of all that was going on during the operation, but, according to his own testimony, not only

given to those who were present on the occasion, but also before the Canadian Institute, on the 22nd of the same month, he did not feel the slightest sensation of pain during the entire amputation, nor in sewing up the flesh, until the last stitch was being taken ; which took place after I had withdrawn my influence from him. Nor was there a loss of more than six or eight drops of blood, during the ten or fifteen minutes that must have expired while sewing up the wound.

Again, not only do we often find a control of the mind over the nerves of sensation, but also over the voluntary nerves of motion. One morning in the fall of 1888, Mr. Saul of No. 10 Buchanan St., Toronto, Ont., called on me to go and see a lady at No. 12 Maplewood Ave. I found her suffering with rheumatic pains in the arm and shoulder. One of her arms was partially paralyzed; so much so that she had not been able to raise it above her waist for sixteen or eighteen months. I took hold of her hand with my left hand, and commenced rubbing her arm upon the naked flesh, straight down from the shoulder. In about ten minutes after I entered the house, she was able to raise her hand to the top of her head, and put it to the back of her neck and has had the use of her arm ever since.

PARALYSIS CURED BY A SHOT-GUN.

While lecturing in the city of Reading, Pa., in the year 1877, an incident came under my notice of an old man who had been crippled for years as the result of chronic rheumatism. Although there seemed to have been no ossification of the joints, he had neither the use of his hands, arms or lower limbs. He had not stood on his feet alone for a number of years, could not feed himself, dress or undress. On the 13th of January, his son, a young man of about eighteen years of age, was loading a shotgun preparatory to a hunting expedition. The old gentleman conceived the idea that the shotgun would explode and protested against the boy loading it in the same room with him. The young man, apprehending no danger, went on loading the gun, without heeding the father. After the cap was placed upon the nipple, in putting the hammer down, it seems that it went down a little heavily and the gun exploded. The old gentleman who, up to this time, could move neither hand nor foot, jumped from the seat where he had been placed, ran out into the street, exclaiming: "I am dead!! I am dead!!! The boy shot me!" When people had gathered around him and proved to his satisfaction that he was making too much noise for a dead man, he realized that he must be alive; but

if alive, he was a paralytic. In response to this idea, he at once dropped down in the middle of the street and called for help to assist him back to the house. The people who had gathered around him, realizing from the force of circumstances the fact that he ran out of his own accord, persuaded him to get up and try his limbs. When he did so, he found to his astonishment, that the use of his limbs had returned.

He lived for years afterward without any return of his former condition. The suggestion in this case was the result of his own conception, brought about by the force of circumstances and was not the response of the body to any will force ; proving conclusively the involuntary response of the body to the conditions of the mind independent of the means by which it may be employed.

If, instead of the shotgun, this condition of the mind had been provided through the teachings of Christian Science, Faith Cure, or Mind Cure, the result might have been similar; but from the fact that the cure was performed under the circumstances above given, shows us that the cures performed by what is known as mental science, in all its various phases, are but the involuntary response of matter to positive conditions of mind and not to any particular dogma, creed or faith.

As an evidence of the position I have just taken concerning mental science, I will cite another incident in my experience. While in the upper peninsular of Michigan, some years ago, I was called to the bedside of a lady whom the doctor had given up to die, although he could find no absolute physical cause for her condition. After diagnosing her case and finding that the whole trouble, so far as her physical constitution was concerned, was simply functional and not organic, I at once set about to find some method of suggestion by which I could stimulate her mind to a positive condition, which would demand a response of the physical. After looking at her from a physiognomical and phrenological standpoint, I found that the base of her brain seemed to be well rounded out and that she was a woman of natural passions. I at once took her husband into my confidence and told him that the easiest method of arousing her would be to excite her jealousy. I found that they had in their employ a nurse who had passed the middle of life, and undoubtedly was very faithful and good as a nurse, yet it was not nursing that the patient most needed, but rather stimulation. I suggested to the husband that he procure the services of some fine looking young lady and dismiss the other nurse. According to my suggestion, the

husband took a young nurse into his confidence, as to what he was trying to bring about, and talking in a tone that could be heard by the wife, from where she lay (although pretending it was not intended for her hearing), he began to caution the young nurse to take particular interest in the house, children, etc., because if anything should happen to his wife, he would need someone to take her place. The wife hearing this, when her husband retired, she began to give him a curtain lecture, stating : " So you expect me to die, do you? And if I died, I suppose that Miss —— is your ideal to take my place. Now I want you to know that I am not dead yet, and I don't intend that she shall come in and take care of my children," etc. From that hour she began to improve and in three days dismissed the young nurse. After she had recovered sufficiently, the husband proved to her satisfaction that what she needed was not medicine, but the stimulation of her mind, and that perhaps no other method than that used would have brought it about ; that he was as faithful to her as any man could be, and that there had been no intention on his part to take the young lady in her place, no matter what might have happened.

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HYSTERIA CURED BY A RED-HOT POKER.

Carrying farther the power of suggestion in the influence of mind over matter, I will cite an experience of Dr. Silace C. Blaisdell of New York.

Mrs. Mary Marcus, of Williamsburg, is a woman of very nervous temperament and during the past few years has developed hysteria, which has manifested itself in many ways. Recently she became hysterical and when Dr. Blaisdell arrived she was breathing at the rate of 130 or 140 times a minute and her respiration was so violent that it could be heard all over the house. Her pulse was normal, but her throat was more or less inflamed and the chest muscles, owing to the violent strain placed upon them, were giving her considerable pain. She found it impossible to articulate two consecutive words. The physician, after examining her, came to the conclusion that the case was one of hysteria, pure and simple. He applied the remedies usually prescribed in such cases, but found that they were useless, and at last concluded that an appeal to her mentality rather than to her body would be the only way of effecting a cure. The physician has a voice which would be heard to advantage in front of a regiment of soldiers. He used it on this occa-

sion with even a sterner ring than it possesses naturally.

"Now madam," he said "stop that breathing."

"I c-a-n-t," gasped the patient.

"I will give you exactly two minutes to do so," answered the physician, producing his watch and seating himself on the side of the bed. The two minutes passed and still Mrs. Marcus gave no evidence of being better. Then the physician rose to his feet and in a ringing voice asked for a poker. The implement was brought to him and he ordered the patient's sister to put it in the fire.

"W-h-a-t a-r-e y-o-u g-o-i-n-g t-o d-o?" asked the sufferer between breaths.

"What am I going to do, madam?" said Dr. Blaisdell, with his eyes flashing, "I am going to cauterize you from the nape of your neck to your waist on both sides of your spine."

"Don't hurt me," pleaded the woman with difficulty.

"I must do my duty," said the doctor, "and this is the one thing left. The operation is painful, but necessary. In the event of your submitting to it, well and good. If otherwise, I shall use force. Then turning to the other woman, he asked: "Is the poker cherry red?"

"It is," was the reply.

"Then prepare for the operation," he said to the patient, and dexterously turning her on her face, he drew down the bed clothes and told the sister to hand him the poker before it got cold.

Believing him in earnest, Mrs. Marcus' fright got the better of her hysteria, and in a perfectly natural voice, accompanied by normal breathing, she begged the doctor not to burn her.

Dr. Blaisdell didn't relent so easily, however, and it was not until after many tears and prayers on the part of the patient, that he consented to put away the poker.

"I warn you, however," he said, "that if I hear of the return of this nonsense of yours I shall cauterize you at all hazards. You can check that breathing if you see fit. I am in earnest."

Mrs. Marcus has not had a return of the malady since.

—Clipped from *Utica Globe*.

FAITH AS A CURATIVE AGENT.

Now, while some persons may confine themselves to the practice of medicine, others to magnetism and others to mental science, I am strongly led to the conclusion that, in many cases, the power

used in removing pain or curing disease, is nothing more or less than the result of suggestions made upon the consciousness of the patient. For, while I believe in the influence of medicine and of magnetism, I believe the impression of our consciousness may often have a greater influence upon our bodies than either the influence of medicine or the magnetism of an operator. Where there is reciprocation, or confidence, established between the patient and the physician, there will be a more rapid response of the body to the conditions of health than can reasonably be expected by the slow process of digestion and assimilation brought about by administration of medicine alone. This response of the body to the impressions of mind apply more especially to nervous and functional diseases than to organic trouble.

The doctrine of confidence, or faith, is beautifully illustrated in what is termed the miracles of Jesus Christ, spoken of in the Bible (see Mark 5:25), where a woman "who had an issue of blood twelve years and had suffered many things of many physicians and had spent all she had, but was nothing better, but rather grew worse; when she had heard of Jesus came in the press behind and touched his garment saying: "If I may touch but his clothes I shall be whole," and straightforward the fountain

of her blood dried up, and she felt in her body that she was healed of that plague, Jesus turning to her, said: "Daughter, thy faith has made the whole!"

This is but a sample of the many words of Jesus spoken of in the Gospels, yet it is sufficient to show the response of matter to the faith of the mind. But some one will say that Jesus was Divine and the reason this woman was healed in this extraordinary way was because she had faith in His divine power. But, though we may believe that Jesus was divine, still He did not attribute the curing of the woman to the influence of His divine power, but rather to her faith. In all that Jesus did, He has left us an example that we might follow, and said that greater things than He did shall men do if they believe. Hence, He has not only given us to understand that faith is required on the part of the patient, but also on the part of the operator.

Many instances are on record of this phenomenon, where persons have made their complaints a subject of prayer to God, and in answer to their faith in prayer, have been restored to health. I will now cite a few cases where the faith has seemingly been placed entirely in the ability or power of the healer.

One time while on my way from Chicago to Philadelphia, I was to stop over at Pittsburg to lecture. When I got to the Hotel at Pittsburg, I found a telegram waiting for me, which stated that my wife was very sick and that it was necessary for me to hasten home at once. I immediately cancelled my engagement and took the evening train for Philadelphia. When I got home, I found her so weak, the result of hemorrhages, that she was unable to raise herself in the bed. No sooner had I entered the room than she said: "Now, I shall get well !" I laid my hands upon her and she at once declared she felt strong ; in a few minutes was fast asleep. Only three and a half hours after I entered the house she got up, went to the dining room, ate her breakfast with the rest of the family and did not go back to bed again until the evening, when she seemed quite well. I attribute her marvelous recovery to the faith which she had in my power to help her, and not in the power itself.

I contend that a similar degree of confidence to that which performs a cure will act as a preventive to ward off disease. Hence, if we would ward off the influence of diseases before they make an impression upon our natures, we must meet the positive with the positive ; that is to say, we must

make up our minds positively and firmly that we will repel its influence ; and in proportion as mind is superior to matter so will the positive conditions of the one overcome and control the other. So long as we remain positive there is but little danger of our contracting disease of any kind, but when we become fearful of our surroundings we are then in a negative state and are susceptible to impressions.

As an evidence of this position : Some loathsome and dreaded disease breaks out in a community ; it enters a dwelling where there are four or five persons in a family ; the majority of its members are afraid of the disease and are in a negative state ; hence, when the virus of the disease begins to be emitted, those who are the most sensitive, because the most fearful and negative, are impressed with this virus and are smitten with the disease. The nurse, doctor, and in case of death, the undertaker, have to come in closer proximity with the disease so far as external conditions are concerned than anyone else, yet none of them contracts it. Why ? Simply because their minds are so positive as to be proof against it. So far as its contagious influence is concerned, apart from these positive and negative conditions of the mind, there must be more danger to the doctor, nurse and undertaker than to the different members of the family, because of their im-

mediate contact with the disease. This position is true with small pox, and of epidemic fevers, colds and diseases in general. In still further proof of this position, I will cite a case in my own family, where the positive condition of the mind not only demonstrated its power to ward off disease, but actually repelled and expelled the disease that had already fastened itself upon the body.

My son, then a boy of about nine years of age, having travelled with me during one of my lecturing tours, in listening to my teachings, had got a fair idea of the principles involved. He was taken with the measles, and when they were about fully developed, said to his mother: "Ma, I don't like these things about me." His mother said, "Well, Charley, you will have to bear with it until they are gone, and you get well." Charley said: "I don't think so! Don't you know what papa says, 'that if you make up your mind to do a thing and are positive that you are right, it will be so?' Now, I think if I were to take a wash tub and go out under the hydrant and wash these things off I would be well." His mother tried to persuade him of the danger of taking cold, but he still persisted; when his mother told him if he must wash them off to take some warm water and do it in the bath room, but Charley still stuck to the idea of going

outside until his persistence overcame his mother and she consented. Being the fall of the year the weather was very cold, still he went out and washed the measles off. His mother rubbed him down quite dry, and in a little while he said: "Now, I feel better!" The next day he went to play as though nothing had happened. There seems to be no other solution of this phenomenon save that the positive condition of the mind balanced the circulation of the blood and nerve fluid, so as to expel the influence of disease from within the system and repelled the influence of the weather and the chilling impression of the water from without. This was done in response to the positive impressions of the mind of the boy upon his own body.

As another illustration of this position, I remember at one time being in the central part of Pennsylvania, where there was a settlement of religionists called "Dunkards." Their form of baptism was immersion in the open stream. It was in the middle of January, when six of the converts were to be baptized. The preacher cut away the ice from the shore and got out into the open stream. After finding a suitable place, he called to one of the converts; an old man I should suppose of about sixty years of age entered into the water, was

baptized, came out of the stream and stood on the shore; another entered and was baptized; this continued until the six had been immersed, each one coming out of the water as soon as baptized and standing on the shore, waiting until the ceremony was over. The converts' clothing was frozen so stiffly that they were like boards. Still, they continued to praise God, and in response to their faith or confidence, they seemed to be unaffected by the inclemency of the weather and the influence of the water and were prevented from taking cold.

The question naturally arises in the mind of the philosopher, were nature's laws suspended, or were the minds of the converts rendered so positive by their faith in God, that the influence of the atmosphere had no effect upon their bodies? I claim the latter solution to be the more rational.

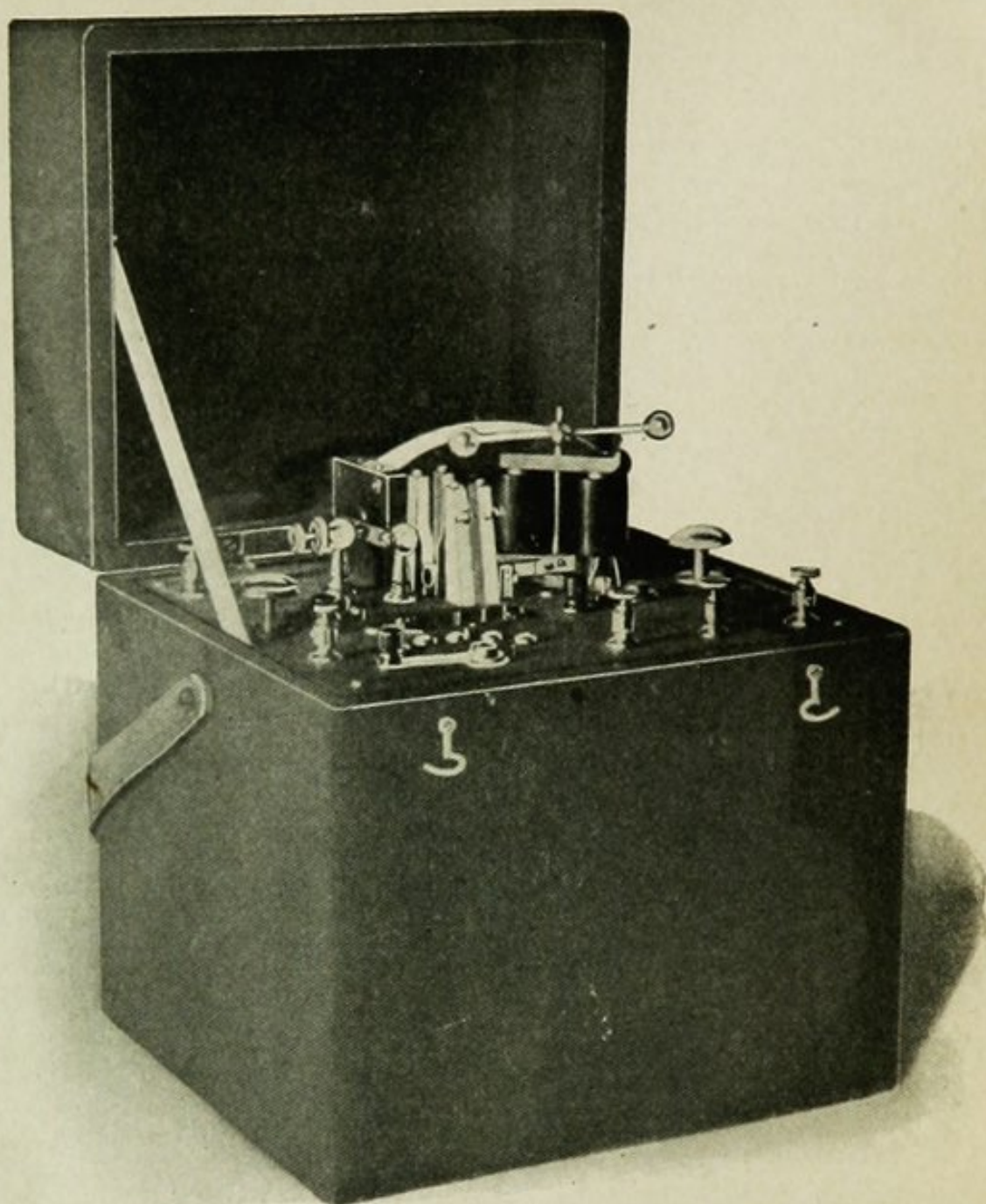
CONCLUSION.

Perhaps the question may be asked, how can the physician best obtain the confidence of the patient in order that the influence of suggestion may do its work?

To this I answer that different methods may be used, as will best meet the temperament and dis-

position of the patient. If the patient is what may be termed the mental temperament ; one whose reasoning powers seem to be ever uppermost ; then care should be taken not to antagonize, but to use arguments as near the line of the patient's belief as possible. As, for instance, reasoning along the line of the influence of the mind over the body. How we are all affected by trouble or pleasure, etc. With others we may use a positive command ; as in the case mentioned of the red hot poker. With others we can best gain their confidence and call off their mind from the condition of their body, by first offering them our sympathy and then gradually getting them interested in some other subject.

THE END.



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