




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Health

Nature

A practical treatise upon the use
of Galvanic Electricity for the
cure of diseases in general 

By

Dr. A. T. Sanden.

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DEFINITION OF "HERCULEX AND THE 2^d GALVANIC LIFE CURRENT.

"Herculex" is derived from Hercules, which means *the incarnation of manly strength and endurance*, and "Lex," meaning *Law*. Hence "Herculex" means, *The Law of Manly Strength and Endurance*.

The GALVANIC LIFE CURRENT is Animal Electricity generated by Dr. Sanden's Electric Herculex from two electrically opposite metals by a molecular disturbance (chemical action) of latent or stored force, which, being attracted and accumulated by the motor nerve centre in man, becomes *kinetic energy*. Its distribution to the different organs of the body is governed by the law of supply and demand. Its potentiality is a manifestation of life. The dynamics of the force of life are the functional activities and their product is Health, Strength and Vigor.

..... **Dr. A. T. Sanden.**

THE LIFE-GIVING ELEMENT.

FROM the earliest times recorded in history, mankind has believed that there existed an all-powerful element or treatment which would arrest the natural progress of decay in the human system and prolong life—if some wise man could only discover it.

And, from the beginning of recorded time, there have been individuals, many of them men of real and profound learning, or their epoch, who have believed they possessed the secret of his life-giving elixir.

But it is only since the world-wide revolution brought about by exact scientific research—practically, since the beginning of this century—that we can really claim to have discovered tangible facts which warrant us in believing the arrest of decomposition, the cure of apparently incurable ailments, and increased longevity, to be actually and indisputably possible.

To a certain extent, the uses of natural phenomena emanating from the three great elements, were known to the ancients, just as the medicinal properties of certain plants became known, by secret experiments among men whose knowledge was far in advance of their fellows. The expansive force of steam, for instance, and the magnetic properties of the loadstone, or of electric currents produced by friction, were frequently used by the wise men and astrologers in conveying an impression of their supernatural powers to the common people.

Yet it was well into the eighteenth century before either drugs, herbs, elementary forces—water, heat, electricity—or physical training, received the general scientific study which placed their beneficial effects at the disposal of the entire human race, irrespective of color or nationality. (In putting the case thus broadly, I do not overlook the marvellous physical development and vigor of the Greeks and Romans, or the great ages attained by the nomadic Arab tribes, as a result of their abstemious living. Their failure to impart their valuable knowledge upon those subjects to mankind in general bears out my previous statements).

And from the middle of this century, the use of elementary force—electricity, particularly—has been slowly superseding drugs, chemicals and all other forms of treatment as a curative agent.

This has been brought about, quite naturally, as a result of the marvellous progress which has been made in the commercial uses of electricity. After the discovery that the galvanic current would remove particles of solid silver from an ingot and deposit them uniformly upon other metallic substances, through the medium of a transparent chemical bath, it seemed reasonable to believe that it was also capable of producing a powerful effect upon the tissues of the human body. And members of the medical profession began a series of experiments which have been productive of marvellous results.

We have, for instance, undisputed testimony that senile decline with loss of mental-powers, may be arrested by application of the current to the motor centres of the nervous system. In fact, the rapidity and completeness of cures from the use of electric currents in paralysis, neuralgia and other nervous diseases,—administered by such eminent specialists as Dr. Julius Althaus, of Berlin and London; Dr. Wilhelm Erb, of Leipsic; Drs. R. Remak, Moritz Meyer, Rumpf, Lowenfeld and Arndt—leaves no doubt whatever that this agent accomplishes results which it is impossible to obtain through the use of drugs or so-called medicines.

But, with all these marvellous demonstrations, the science of healing has been seriously hampered by the well-known disinclination of the medical profession to accept even established facts before their use has become general practice.

Even the results of Dr. Althaus' 40 years' experimenting upon the electric treatment of paralysis are still looked upon with distrust by many of his brother practitioners, and the series of discoveries concerning the use of electricity in disturbed menstruation are now struggling for official recognition.

This drawback of skepticism, however, has had less weight in my own researches, and has influenced my practice probably less than that of any other specialist in the profession, for this reason, *I have always accepted results for just what they were worth.* When a man has come to me, after a fair trial of my Electric Hercules treatment, and stated that *he felt like another man*, hadn't a pain or an ache, and was able to give more attention to his business and social duties than in years before, I assumed that he knew what he was talking about (especially if my examination of him verified his statements). And in such cases I have not considered it necessary to wait until the medical profession officially declared that my patient's cure *was* a cure before proceeding to treat the next patient with a similar case in a similar manner. But, above and beyond the confi-

dence in my treatment, arising from the actual results obtained, is the fact that it differs materially from the practice of other medical electricians in its form of application. The profession, as a body, has, up to this time, confined its treatment to the use of galvanic batteries in the consulting room, which is, of course, exceedingly remunerative for the physician, but which puts the patient to no little inconvenience and expense if he would follow it up systematically, and has the disadvantage of trying to accomplish in an hour or two, by means of strong currents, what can be much more effectively and pleasantly brought about by milder currents applied in such a manner as not to interfere with the patient's comfort or regular occupations. Strong currents, such as are generated by large machine batteries, or their sudden application, are seldom beneficial to patients who have delicate nervous organizations, and the results of my practice have shown me that the galvanic current, adjusted to the patient's individual system and absorbed by it in as natural a process as that of eating or breathing, will produce absolute cures where other applications of electricity fail.

To absorb the galvanic current in this manner, it must be received from some form of battery which may be worn upon the person with as little inconvenience as clothing—and of all forms in which such a battery may be worn, my *Electric Hercules body appliance* is the most suitable and convenient in every way.

My studies in electro-therapeutics and experiments with different forms of electric appliances for self-treatment have covered a period of thirty years or more, during which time I have cured thousands of people by the judicious use and application of the galvanic current, as testimonial letters from my patients will show—cured them when drugs and other treatment had failed.

This, it seems to me, is a sufficient introduction to you whose health I wish to restore in a similar manner.

ELECTRIC CURRENTS AND HOW THEY ARE PRODUCED.

IN order that you may thoroughly understand the nature of the remedy which I use, a brief and simple explanation of the way in which electricity operates is necessary—that is, a plain description of electric currents which everyone may comprehend without going into technicalities.

As long ago as the fifth century, **B. C.**, it was known that amber and similar substances, when rubbed with silk or other

heating material, would attract small and light objects. But,



until the eighteenth century, this knowledge was, with the exceptions previously referred to, never put to practical use.

About 1750, however, it was demonstrated that the power of attraction developed by revolving a glass disc between two absorbing cushions could be utilized for mechanical purposes.

And this gradually led to the construction of a machine which produced almost supernatural phenomena. During the experimenting with this machine, it was found that the new force was exerted only in circuits, returning invariably to the point at which it was generated, and that, if the human body was interposed in such a way that it formed a connecting link at any portion of this circuit, a distinct contraction of the muscles followed. This led to further experiments by the physicians of that period, having for their object the restoration to partial activity of muscles which, from disease, or disuse had lost their motor power.

Thus, reasoning only from what could be actually seen by the naked eye, it was for many years assumed that the electric current as a medical factor was useful only to excite, irritate, or stimulate muscles and nerves which failed to act in their normal way.

But in 1800, Volta discovered that an attractive force, apparently identical with that produced by the frictional machine, could be generated by the action of certain chemical solutions upon such minerals as copper and zinc (with an occasional substitution of carbon for the copper). And, in

time, this new current became distinguished from the frictional or "static" by the term "galvanic."

As the peculiarities of these two currents became understood, the elementary force, *electricity*, came to be classed among the fluids, though we cannot yet state with perfect accuracy that electricity *is* a fluid. It has, however so many fluent characteristics that we have, for convenience, treated it as a liquid and measured it as such. For instance, just as we figure that so many *gallons* of water will flow through a six-inch pipe in a given time, we compute that so many *amperes* of electric current will be transmitted through a number 9 copper wire—the word "ampere" representing volume or quantity. In a like manner, we say that a current travelling through a small wire has a *force* of so many "volts," instead of a velocity of so many feet per minute, as would be the term applied to water. And the word "resistance," in speaking of electricity, is used to denote the amount of *obstruction* which certain bodies or substances will oppose to the passage of an electric current through them, just as we understand that a one inch pipe will retard the passage of 1,000 gallons of water much longer than a six-inch pipe.

With this explanation, it will be readily seen that a much larger *quantity*, or "amperage," of current may be transmitted through a quarter-inch wire in a given length of time than through a wire only one-eighth as large. And that if the same quantity, or "amperage," be *forced* through the *smaller wire* in the *same time*, it must necessarily travel at a much greater *speed*, or "voltage." Also it must be equally plain that a current of great force will be felt much more decidedly, or produce a greater disturbance than one of greater volume which travels at a slower rate. (A man may easily swim against 10,000 tons of water moving at the rate of two miles per hour, yet half a ton, delivered in a jet from the hose nozzle of a fire engine will knock him down in a fraction of a second.)

These qualities of force, or "voltage," and volume, or "amperage," mark the difference between the two great classes of electric currents: the "galvanic," produced by chemical cells, having great volume but little force; and the "static" (or frictional), having great force, or "voltage," with but little volume. And the difference in effect upon the human system is that the "static," or frictional, current merely stimulates or irritates the sluggish nerves and muscles; while the "galvanic," quietly and imperceptibly, effects chemical changes in the blood, organs and entire anatomy, removing the causes of disease, killing germs which it is impossible to reach by means

of drugs, and restoring the body to a normal, healthy condition, always provided that it is applied in a proper manner and with a thorough knowledge of its effects.

Besides the "static" and "galvanic" currents, there is a third class (discovered by Faraday in 1831-32), which has in *general* the same stimulating qualities as the "static," with little or none of the chemical or electrolytic effects of the "galvanic." This is the "Faradic," or *induced*, current; and is produced upon coils of wire, entirely insulated from each other, one of which is connected to the chemical battery or static machine. This primary current, were it unbroken, would have no effect upon the secondary or outside coil of wire, but, when it is rapidly and continuously broken and closed by means of a vibrating connection, the direction in which it flows (from positive to negative pole) is alternately reversed; and this reversal produces by introduction another current of much greater force, or "voltage," upon the secondary coil.

Now, since the recognition, by the profession, of the distinct effects produced by each of these three currents, it has been assumed that in general practice a use of all three was necessary in order to remedy different varieties of disease. But my experience has led me to differ materially with this view, and to believe that—

There are few chronic diseases which, taken in time, cannot be cured or alleviated by means of the galvanic current alone, in a soothing and painless manner; also that

The "static" and "faradic" currents, in connection with the "galvanic," are efficient in treating only a limited number of diseases and, unless applied by the patient at home, possess the disadvantage of personal exposure in the consulting room.

This opinion is based upon careful observation in many thousands of cases, and is supported by such eminent authority as M. Remak, one of the most experienced electricians of the century.

Having demonstrated the fact, conclusively, as I believe, that the galvanic current in the treatment of human disease is absolutely safe, painless and efficient, my attention was next directed to the most convenient forms of its application.

In this relation, I have found that the direct galvanic current, working continuously for several hours, produces a much more lasting effect than intense currents applied for short periods,—just as light and persistent exercise will develop the muscles much more effectively than brief and violent exertions. Beyond this, most sufferers can ill afford the expense of repeated

visits to the consulting room for treatment, and particularly in the case of women, the repugnance to personal exposure during application, even in a confidential interview with one's trusted physician, deters a large number from submitting themselves to treatment which they know will restore them to health.

These various considerations seemed so weighty to me that my experiments had for their chief object the development of some form of application for the galvanic current which should successfully overcome all objections.

The result is my Electric Herculex Appliance, which may be worn under the clothing, day or night, without personal inconvenience, and which effects its cure unconsciously while the patient is engaged in his or her daily occupations or asleep.

DISEASE IN GENERAL.

WITH the foregoing facts, concerning the general nature of electric currents and their effect upon the human system before you, I shall be able to demonstrate more clearly the application of electricity in different forms of disease.

It is possible, of course, that you are in sound health at present, and fortunately have no need of curative treatment. I hope such is the case. But disease and physical breakdowns have a way of coming so unexpectedly at times, often from causes so trivial as to escape previous notice, that this information may become valuable when you least expect it.

Then, again, you may be one of those who suffer from a mysterious ailment which your physician has failed to name because you are unable to correctly describe its symptoms. In reading this treatise you may recognize your own peculiar case. Or, if not ill enough to require a doctor, you may be able to diagnose the beginnings of some trouble which should receive proper attention before it reaches a serious development.

Possibly, also, you have lived, during some portion of your life, in a careless or imprudent manner which has brought on nervous, chronic maladies that you *do not care to discuss* with anyone. If this happens to be the case, you will find herein a great deal of confidential advice which will assuredly benefit you without the necessity of a consultation until you are fully disposed to call at my office or communicate by mail. No matter what the cause of your trouble may have been, let me earnestly assure you that, my greatest desire professionally is to open your eyes to your condition, and then alleviate your sufferings.

NEITHER SICK NOR WELL.

THIS unhappy borderland betwixt health and disease is familiar ground to so large a proportion of our modern population that physicians now consider a condition of perfect health extremely rare.

Thousands of people go through their daily routine of life with a feeling of lassitude, of oppression and nervous apprehension, which destroys much of the pleasure of living. They are not sick, in the general understanding of the word, and they are not by any means well—just dragging along, doing what they are obliged to do in a perfunctory manner, and worrying their hearts out over trifles which would never even occur to a person in sound health.

There is a cause for all this, of course, just as there is a definite cause for everything which is unnatural. Nature intended that men and women should enjoy a superabundance of strength and energy, and it is only when some of Nature's laws are violated that we fall short of this. Plenty of exercise and sleep are among the requirements for perfect health. Yet how many get them? Proper food, bathing, and a *careful avoidance of all excesses* are even more important, and all are necessary to preserve in us that essence of life itself—"vitality," which is but another name for animal electricity.

The loss of vitality, with the weakened, dragged condition of the system resulting from its absence, is brought about in a number of different ways, among which are overwork, mental strain, over-indulgence of any sort, loss of sleep, etc. And the attempt to spur on a body, thus robbed of its proper reserve strength, to accomplish its regular daily work, results, sooner or later, in chronic invalidism, impaired organic action or nervous prostration, which the medical profession have found it impossible to cure by means of drugging alone. In fact, such an attempt has been proved to be so hopeless as to drive many a sufferer to suicide as the only relief.

Lost vitality *cannot be patched up; but it can be restored by a proper application of the galvanic current*,—as administered through my Electric Herculex—just as a storage battery which has become exhausted may be re-charged by fresh supplies of electricity.

Suicide, resulting from despondency, is both cowardly and inexcusable, because the means now exist to place every weak man or woman upon an even footing with those who, from the possession of normal health, are in condition to fight successfully the battle of life.

It is unquestionably true that, if every sufferer knew the value of electricity in obstinate, and so-called incurable, diseases, it would be the only remedy used.

RHEUMATISM

IS PROBABLY the most common and discouraging ailment known to mankind, from the fact that, being produced by seemingly trivial imprudences, it gradually obtains so firm a hold upon the system as to become incurable by ordinary means.

My experience with this disease in thousands of cases has led me to believe that it results directly from impurities—such as excess of uric acid, etc.—in the blood. People whose blood and digestive organs are in healthy condition rarely, if ever, suffer from rheumatism. Very few, until the disease has become chronic, are troubled with it during the seasons when they are actively working in the open air. But when the system is clogged with impurities, when many of the muscles fall into disuse during the indoor life of winter, this insidious enemy fastens itself tenaciously upon these defenceless portions of the body and inaugurates a reign of suffering which, from the nature of its attack, drugs or liniments are powerless to alleviate.

The blood, organs and muscles of every human being are continually undergoing a process of waste and repair. Fresh supplies of the solid and liquid food best suited to the requirements of the various organs must be taken into the system at proper intervals. And that portion of them which is not consumed in maintaining normal health and activity should be regularly eliminated from the body through the channels which nature provides for the purpose.

In order to secure this removal of waste material, exercise and regular habits are as essential as the assimilative properties of the food itself. But many of us, particularly those whose daily occupations force them to lead an inactive or indoor life, are so situated that the obtaining of proper exercise, or even proper food, becomes a matter of extreme difficulty. And it is under conditions of this kind that the liver and kidneys become torpid through partial disuse, clogged with waste matter which they lack strength to throw off.

This waste matter becomes more poisonous with every hour that it remains in the system. The poison is communicated:

to the blood, and, through the blood, to other organs and the muscles, with the result that each succeeding day they become less able to act in their normal, healthy manner.

When such a condition becomes chronic, internal dosing, or external applications of liniments are useless. Nothing less than a remedy which will eliminate all of the poison from the system by means of chemical and constitutional action will secure relief.

And this is just what my Electric Herculex will accomplish in a painless and comfortable manner.

In order to permanently conquer the disease, I have found it necessary to follow two different systems of treatment in rheumatism, local and general, from the fact that it requires something more than a temporary alleviation of pain to effect a lasting cure. The intense soreness and stiffness so familiar to all rheumatic sufferers yield readily to a proper local application of the galvanic current, and the secondary attachments which form portions of my Electric Herculex Appliance are especially constructed to fit every portion of the body, stimu-

lating the circulation, and restoring the muscles to a condition of normal flexibility. But, unless a chemical purification of the entire system is effected at the same time, the torturing symptoms are likely to return.

This general purification is brought about by applying the current in such a manner that while reaching the local trouble directly it also passes through the motor centres of the nervous system, which are situated in the small of the back and abdominal region, and which have the most direct effect upon the circulation, removing by electrolytic influence all impurities from the blood and various organs. (See illustrations of primary and secondary appliances,



All my study has been with a view of constructing appliances especially calculated to produce a certain effect under certain conditions. This is where so many of the electric belts now upon the market fall short of the results claimed for them, and why the local relief sometimes experienced from their use is not permanent, from the fact that they leave the necessary work only half done.

To every intelligent person it must be obvious that such a fluid as electricity, which is capable of passing through any portion of the human body regardless of obstructions, in a way that no other known fluid will do, must necessarily exercise a cleansing and purifying influence, provided, of course, that it is properly generated and applied.

LUMBAGO.

THIS is really a concentration of rheumatic blood-poisoning in the region just over the kidneys, where, owing to its

direct action upon the nerve centres, it exercises a cramping influence that interferes with normal action throughout the entire system. And sufferers from this distressing complaint know by experience the difficulty of alleviating it through the use of lotions or internal remedies, which have nothing more than a temporary effect



and which do not reach the seat of the malady at all. But of all those who have become finally impressed with the possibilities of cure offered by the scientific application of galvanic currents—impressed so thoroughly as to put themselves

unreservedly into my hands for treatment—very few have failed to experience entire immunity from the disease thereafter.

This treatment, in itself, is extremely simple and absolutely painless. I study the patients' symptoms to determine how far the lumbago, as an individual disease, may be influenced by other complications, and fit him, or her, with an appliance similar to those used in general rheumatic trouble, but adjusted so as to produce the best results in each particular case. This appliance—my Electric Herculex—the patient wears about the body, under the clothing, day or night, without the slightest sensation of discomfort and with the result that in a short time the dull aching and cramps entirely disappear. *And they very rarely, if ever, come back.* In the event, however, that a severe cold, or undue exposure, does result in a slight return of the

old trouble, during a time when my appliance has been laid aside, as being no longer necessary, a few hours' application will again cause the symptoms to entirely disappear—the Herculex being always ready for application when needed.



WEAK BACK.

AMONG the most delicately adjusted nerves in the entire system are those which control—and convey sensation from—the muscles at the lower end of the spine. It

is a common occurrence for these nerves to become atrophied or inactive, either from lack of the proper exercise to keep them in good condition, or from some continuous occupation that keep them over-excited and inflamed—such as the constant jarring to which railroad employés are subjected—the enforced stooping and cramped position assumed by labourers,

coal handlers, grain handlers and others—or the indolent habits acquired by many women.

As a result, the muscles of this portion of the body become so torpid and weakened that they fail to do their proper work in supporting the trunk in an upright position—unless by an exhausting and painful effort upon the part of the patient.

In cases of this kind my Electric Herculex has proved itself extremely beneficial by restoring a proper circulation of the blood and toning up the nerves and muscles to their normal strength.

SCIATICA

IN ITSELF, is an inflammation of the Sciatic nerve, which passes down the back of the thigh from the lower part of the hip-joint, causing intense suffering and a general feverish condition. But owing to the sympathetic characteristics of all nerves in this portion of the body, many cases diagnosed as Sciatica have their origin in much more sensitive branches of the nervous system, and are consequently more difficult to treat by ordinary methods.

From the time that medical practice was established upon a scientific basis, it has been customary to alleviate the immediate suffering in Sciatica as far as possible, by the local use of blisters, liniments, and even hypodermic injections, to deaden sensation in the region affected and with the usual prescription of drugs internally, to reduce inflammatory conditions in the blood. But this treatment has almost always failed to give permanent relief, and my investigations in electro-therapeutics led me to make a series of experiments with the object of accomplishing an absolute cure in such cases. I was guided in them more or less by the experience of Dr. Damon in alleviating Sciatica while applying galvanic treatment for quite another purpose (fibroid tumor of the womb), and after carefully recording my observations for a period of six months, thoroughly demonstrated the fact that the galvanic current could be applied in every instance, in such a manner that it acted directly upon not only the Sciatic nerve itself but upon other nerves which were sympathetically involved.

Furthermore, I demonstrated that this effect, so far from being merely temporary, actually removed the conditions which caused the inflammation and irritation, giving such thorough relief that the patients were no longer conscious of having nerves in that portion of their bodies.

The secondary attachment (see page 38), which I finally perfected in connection with my primary Herculex appliance for the treatment of Sciatica, has been specially adapted to meet the varying conditions of the disease, especially those which are caused by other complications. But the patient should not infer from this that an expensive series of consultations, or even a single interview with me, are necessary to my supplying him or her with the proper one for the individual case. I assume, of course, that in writing for advice and treatment, those who live at a distance will take me frankly into their confidence and fully explain everything the physician should know about them in order to effect a cure. That is—if there are symptoms of inherited disease, or if the patient has suffered at any time from other troubles of a local or general nature, I should be informed.

As to the effect and convenience of my treatment for Sciatica, the substance of a letter received from one of my patients recently will be, probably, more convincing than a technical description. He says: "I suffered so, at times, that it was impossible to obtain rest in any position, could not stand erect, could only walk with the aid of two canes, and very slowly at that, and could find no position in bed which gave me relief from the shooting pains in my thigh.

"When your Electric Herculex reached me I had very little confidence in it, but within two hours from the time I put it on, strapping the negative electrode upon the inner side of the thigh, as directed, I experienced a comfortable warming sensation that seemed to penetrate to the bone. In another two hours I had forgotten that I had a pain, and for some months had not the slightest return of my old trouble. Then I foolishly allowed myself to get soaked through in a drenching rain, and began to feel a twinge or two. But a prompt return to your appliance stopped the trouble right there, and I believe acted as a preventive to any cold settling in my head or lungs."

SLUGGISH ORGANS.

DYSPEPSIA, MELANCHOLIA, ETC.

IN THE foregoing articles I have described ailments which arise from deranged conditions of the general system brought about by improper action of the blood and motor nerves—that is to say, practically caused by lack of sufficient vitality. And this brings us to a discussion of the imprudences which sap the vital element.

All excesses are injurious—excessive eating, drinking, smoking, or labor, as much as over-indulgence in the mental or physical pleasures.

And one of the commonest causes of general debility is a derangement of the digestive and assimilative organs. Most of us eat and drink unwisely. We overload the stomach with food which, though pleasing to the taste, lacks the proper nourishing qualities; or with stimulating liquids which have a tendency to weaken the gastric juices and impair digestion. The first result of impaired digestion is the retaining within the system of material from which the proper amount of nutriment has not been extracted, and which consequently offers resistance to the muscular action which ordinarily would eject it from the body. This half-digested material begins to decompose within a few hours and, as I have mentioned in a previous article, gradually impregnates everything in its vicinity with a poison which produces most distressing sensations.

A person in ordinarily perfect health may bring upon himself dyspepsia, liver complaint, chronic constipation, kidney and bladder trouble, and the condition known as melancholia, merely by overloading his digestive organs in the gratification of what is considered a healthy appetite, even though he refrains from all other excesses.

Melancholia, one of the most serious and distressing complaints experienced by human beings, is nothing more or less than nervous dyspepsia. Constipation is a direct result of improper assimilation of food by the digestive organs. Enlarged or sluggish liver comes from the same causes. And any or all of these troubles will result in a weakened and debilitated condition of the entire system unless checked.

It is not at all necessary for the average man or woman to have a technical knowledge of medicine in order to understand that the first step towards recovery in complaints of this kind is to remove the primary cause by exercising care as to the amount and quality of the food taken into their stomach. *But dieting alone will not reduce the size of an enlarged liver, or effect a complete cure of dyspepsia.* There must also be employed some curative agent which will tone, without clogging in another way, as drugs will do, the digestive organs—something to assist and strengthen Nature in her efforts to restore normal action again. And this the galvanic current properly applied accomplishes in an absolutely non-injurious way. I have had patients come to me in such a distressed mental condition that every trivial sensation within their body was magnified into a

symptom of some fatal disease, men and women whose lives were thoroughly miserable from the apprehension that they had, or were about to have, every fatal disease known to science—appendicitis, typhoid, gall stones, cholera, etc. And after the experience of a day or two in wearing the Electric Herculex Appliance, which my experience had proved to be the proper one for their individual cases, I have received communications from them which told in unmistakable terms of their relief and improved condition. It should be also borne in mind that these appliances, and the professional advice which accompanied them, cost each patient less than one visit to any of the prominent specialists.

BILIOUSNESS OR LIVER COMPLAINT

IS CAUSED by the failure of the liver to provide its proper secretion for the digestion and assimilation of food taken into the body. This inaction is brought about by a number of causes, among which are the overloading of the system with foods and liquids that do not easily digest, or that clog the bowels, without calling upon the liver for the secretion which aids in separating from them the impurities that should be promptly discharged from the body.

The painful and weakening results are too well known to need description. The effect of galvanic electricity in the treatment of this malady is marvellous. An application of my Electric Herculex for a few hours brings effective relief in every instance, by toning up the sluggish liver until it acts in a natural manner.

CONSTIPATION

IS ONE of the first and most quickly noticeable results of sluggish action upon the part of the digestive organs, as I have outlined in the foregoing articles. It is one of the troubles most easily cured by means of galvanic electricity, which increases the natural action of the bowels by its effect upon muscular fibres that exist in the walls of the intestines. The motion produced by the galvanic current as generated by my Herculex is involuntary; unconscious, and of a wavelike character, extending from the upper to the lower extremity of the intestinal canal in successive contractions of these muscular fibres. This physiological occurrence is identical with the natural peristaltic action of the intestines and immediately restores the bowels to their proper active condition.

I believe in aiding Nature. Physics are only temporary relief. The longer they are taken the stronger must be their composition.

KIDNEY AND BLADDER TROUBLES

USUALLY arise from the same class of sluggish action in these organs as that which produces the liver and bowel complaints above mentioned. They fail to perform their ordinary normal functions of carrying off the waste from the body and this poisonous matter accumulates until the contamination spreads through the system.

In the kidneys the usual result is the growth of a poisonous fungus which adheres to the walls of their various passages and slowly rots them away. While, in the bladder, the poisonous secretions produce either a constant desire to pass water without the ability to do so, or an unusual copious discharge that drains the system of the moisture and other necessities for a healthy condition of the blood.

If the disease is diagnosed in its true form by a reputable physician, before it has made too great progress, a system of rigid dieting, exercise and hygienic treatment will often effect a temporary relief—temporary, because, with the least future indiscretion, it is likely to return again in a more aggravated form. Then drugs are prescribed to irritate the organs and stimulate them to unnatural activity which, in time, exhausts their vitality and leaves them in a worse condition than before.

With the galvanic treatment however, we work on different lines, and, if commenced in time, more successful ones. It is yet a little too early in the science of electro-therapeutics to say definitely that we can, by means of the galvanic current, effect an absolute cure of Bright's disease in its advanced stages, but we can and do tone up the general system to almost normal strength so that nature herself assists the specialist in his treatment. And the galvanic current, passing through the poisoned kidneys has an antiseptic purifying action which prevent further spread of the contamination and assists the organs themselves to throw off the impurities before they can accumulate. So that in ordinary cases of kidney and liver trouble it is possible to effect a cure by the galvanic current alone without other treatment.

I have treated thousands of patients suffering from these complaints with my Electric Herculex appliances and have, in every instance, succeeded in relieving, if not entirely curing them.

THE DISEASES PECULIAR TO VARIOUS OCCUPATIONS

ARE usually so insidious in their approach as to cause little or no alarm upon the part of the patient until his condition demands serious attention, and from this very fact of their slow and gradual mastery of the system, may be easily checked and cured by simple applications of galvanic electricity in a manner which does not cause the patient the slightest inconvenience.

Judges, pleaders and even the reporters whose daily occupation confines them in improperly ventilated and otherwise unhealthy court rooms, usually become so absorbed in the vital interest attached to knotty legal, or criminal cases as to entirely lose sight of the fact that they sit or stand in cramped positions, breathe foul, vitiated air, and at irregular hours snatch hasty, improperly cooked meals, which breed dyspepsia as quickly as the foul air does consumption and pneumonia, not to mention the constant danger of paralysis and the various nerve disorders resulting from physical and mental strain.



Broken rest, irregular meals, office confinement and the anxiety caused by business affairs, all play a prominent part in breaking down many of our best commercial and professional men—bankers, brokers, merchants, doctors and members of the literary profession.

Undue exposure to wind and rain, heat and cold, are the forerunners of acute inflammatory and rheumatic affections among the maritime and engineering classes; also those of our city inhabitants whose occupations subject them to the same exposure.

Railroad officials, from the constant jar of travelling, are subject to nervous breakdowns in addition to the troubles brought on by exposure to all kinds of weather. Men who use various chemicals in their daily occupation are subject to insidious blood-poisoning, which develops ulceration upon various portions of the mucous membrane.

But in almost every instance the inevitable final breakdown may be avoided if the danger is realized in time and some remedy or agent employed which will keep the organs and system in a practically normal condition. Stimulants will, of course, seem to do so, and for this reason they are the first and usual resort of those who feel the depression arising from overwork—but their effect is merely temporary, and this working upon borrowed strength is always a serious drain upon the reserve fund of vitality with which every human being should be charged. Electricity, on the contrary, adds the stimulating effect of actual renewed and restored strength itself, and may be drawn upon with impunity. I have testimonials from hundreds of professional, laboring and commercial men such as I have described above, who state that no matter how severe a strain they may have undergone from mental or physical exertion, the use of my Electric Herculex appliances during one or two nights will insure them sound, refreshing sleep and a continuance of its use for the proper length of time will give them the physical strength to attempt work of an even more arduous nature without a single day's interruption.

BLOOD DISEASES

ARISE from impoverishment or general poisoning of the blood. The poisoning, as I have described before, comes from a clogging of the system with impurities, the essence of which is communicated to the blood, and so spread to other portions of the body. This is brought about by improper breathing or bronchial obstructions which prevent the blood from absorbing its proper amount of oxygen through the tissues of the lungs, and excesses in eating or drinking which weaken the nourishing extracts that the gastric juices obtain from food in the stomach and communicate to the blood.

The immediate, and most noticeable effect of this impoverishment or poisoning is an eruption which breaks through the skin, upon the face and other portions of the body, or which appears inwardly upon the mucous lining of the various passages—this eruption being Nature's effort to expel the poison, or to obtain external nourishment through the pores. So invariably does this class of disease show itself in this way that when we see a person whose face is covered with blotches or pimples, we understand at once that his or her blood is out of order, though we may not be able to state at first glance which one of the thousand different causes may have produced the trouble.

The treatment for blood diseases varies, of course, with their exact nature and origin, some being of a simple nature, which lend themselves readily to treatment, while others acquire months of rigidly careful living, with special treatment, before they can be entirely eradicated from the system. It is particularly in cases arising from uric acid poisoning that my use of the galvanic current has demonstrated its superiority over drugs.

I cannot too strongly emphasize the fact that electricity, when applied through my Electric Herculex appliance, effects a chemical change, known as electrolysis, in any substance through which it passes, and that this change is always of a purifying nature. Also, that there is no portion or substance of the human body through which the galvanic current cannot freely pass, while the action of all drug medicines taken into the stomach is invariably restricted to a greater or less degree, and because of this limitation is weakened in effectiveness and takes much longer to produce results of any kind than electricity.

My Electric Herculex appliances are so constructed as to convey the current directly to the centres of the circulatory system, and the work of purifying the blood commences the moment they are adjusted to the person—not hours or days afterward, as is often the case with drugs, if they purify at all. The promptness with which the galvanic current attacks disorders of the blood at their very roots is in no way more convincingly shown than by the gradual clearing of the patient's complexion after a few days' treatment.

Where the complaint has been of a deep-seated, constitutional nature, it has taken somewhat longer to produce the desired result, but the electrolytic effect of the galvanic current upon the blood has been evident from the first application, and the patient has felt that a constitutional and beneficial change was being wrought in his system, hour by hour.

PARALYSIS AND KINDRED COMPLAINTS.

ONE of the foremost living authorities upon electro-therapeutics, Dr. Monell, has stated in a recent work : " In theory, not only is there no remedy for paralysis equal to electricity, but treatment by this remedy is reduced almost to an exact science"—and my own experience leads me to concur with him in all that this statement implies. In fact, the galvanic current is the remedy, of all others, for paralytic, spinal and all similar complaints.

Paralysis, which may be generally defined as a loss of voluntary motion in any part of the body, arises from a number of different causes, among which, *when constitutional*, are abnormal conditions resulting from variola, diphtheria, typhoid, syphilis, gout, etc., poisoning by lead, mercury, arsenic, phosphorus, or from hysteria. *When central*, it is usually caused by some lesion of one of the great nerve centres, commonly shown in hemiplegia, paraplegia, etc., or, *when peripheral*, by action of cold upon the nerve supplying the affected part—by mechanical injuries of muscle or nerve, by pressure, as from a tumor, a crutch, etc.—by injury or destruction of a nerve from suppuration of a part from over use of a muscle or set of muscles. Thus it will be readily understood that paralysis of any kind is essentially a nerve disease—that is, a disease produced by failure of the proper nerves to carry intelligence from the brain to any particular muscle or organ, and the gradual disuse of the muscle or organ, because of this lack of communication, until it becomes too stiffened to act.

When such a condition exists it would seem obvious that the first treatment should be an attempt to restore the affected nerves to normal activity, and re-establish communication with the muscles. And it is equally obvious that, as the galvanic current produces a quicker, more powerful and more lasting effect upon the nerves than any other agent known to medical science, it should be the first and principal remedy employed.

It must be understood, however, that a trouble serious enough to cause the absolute uselessness of any portion of the body cannot be cured in a day. A piece of machinery—a locomotive, for instance—which after a year's exposure to the weather, without use, has become rusted solid, cannot be expected to come to life and haul a train of cars the moment a

new fire is started under its palsied boiler. On the contrary, it is likely to take several weeks of careful oiling and cleaning in every part before it is fit for active use. The stiffened muscles of a paralytic require careful, persistent manipulation while the life-giving current is flowing through them, and afterward, for some little time, before they can be depended upon to act in a perfectly normal manner. That they can be made to do so, however, by means of my Electric Herculex appliances and general treatment is a fact which I have demonstrated many times over, and with many different cases.

The same principles of treatment which have proved so successful in paralysis hold good in all other nervous and muscular affections, such as spinal complaints, locomotor ataxia, etc., and the same current, which is so efficacious in ordinary blood troubles, will chemically neutralize and prevent the deposit of the chalky sediment in the blood vessels of the brain, which becoming ruptured, produces apoplexy. In this relation I must again impress upon the reader the absolute penetration of the galvanic current to every remote or otherwise inaccessible portion of the body, and its chemically purifying and revivifying effect. We cannot yet say that in galvanic electricity we have found a universal panacea against every ill that man is subject to, but we can, and do say, that it approaches more closely the spark of life itself than any other element or force ever discovered.

THE DISEASES OF WOMEN.

GENERALLY speaking, and having reference to those complaints which usually affect women alone, these ailments may be assumed to invariably arise from abnormal or disturbed uterine or ovarian conditions.

All women are, of course, subject to the ordinary diseases which affect the male and female sex alike, but beyond this susceptibility are tendencies, all their own, to ill health and weakness, arising from uterine derangements. And these troubles are usually of the kind that wear life away, drop by drop, robbing it of most of its sweetness and comfort, rather than the class which after a short, dangerous illness, either kill the patient or disappear entirely with convalescence.

Every woman has been at some time in position to add personal emphasis to the definition of "backache." Most

women have experienced the serious results, of deranged and interrupted menstruation. Leucorrhea, congestion of the ovaries and uterine hemorrhages are, or have been, serious disturbances in the lives of thousands whose husbands or families never guessed the danger they ran or the misery they endured for months at a time in silence. Hysteria, nervous prostration and other troubles arising from the same causes have made chronic invalids of many unmarried women who lacked the courage to take their physician fully into their confidence, or who found him insufficiently posted in the absolutely certain effects produced in all female troubles by the proper use of galvanic electricity.



In all of my experience I have found no patients more susceptible to the remedial effects of galvanism than women, nor, after many years of thorough familiarity with every organ, muscle, bone, nerve and fibre of the human body, have I ever found a portion of it which responds more quickly to the toning and restoring qualities of galvanic electricity than the female vital organs.

There is, to-day, neither necessity nor excuse for any woman's suffering, for days and weeks, the dragging misery of an aching back when a few hours' application of the galvanic current will cause the pain to entirely disappear and give her the feeling of buoyant elasticity experienced by those in perfect health. Neither is there any good reason why there should be serious uterine hemorrhages in spite of the best medical treatment available, when it is a demonstrated fact that the electric current, properly applied, will cause an instantaneous contraction of the uterus and stoppage of the bleeding. Suspended menstruation may be restored to normal action in a very short

time by the gentle, toning effect of the galvanic current. Leucorrhea may be cured, ovarian or uterine abscesses and tumors may be absorbed, by the same curative, life-restoring agent.

To put it more briefly, galvanic electricity is essentially the chief remedy for female troubles. It restores the vitality which nature intended every man and woman to have, and this restored vitality which is "nerve force," causes each separate organ to act in the normal manner prescribed for it by nature. For the treatment of female troubles, I think I may justly claim that my Electric Herculex appliances meet and overcome more of the objections which seem of vital importance to women than any other form of treatment known to science. In the first place, there is no exposure of the person in the consulting room or elsewhere. The Electric Herculex, fitting closely to the proper portion of the body, is worn underneath the clothing, day or night, in such a manner that no protuberance or outward sign betrays its presence. Its healing effect is immediate and constant, as soon as it is used. And the permanent relief it has given can only be faintly estimated from the thousands of testimonial letters concerning its efficacy which I have received, and am still receiving, in largely increasing numbers.

NEURALGIA AND NERVOUS HEADACHE

WHILE not confined to women alone, by any means, are more prevalent among their sex than among men—and usually arise from disorders of the stomach and liver, aggravated by the disturbed conditions of the female organs.

In men the same distressing complaints often result from brain and general nervous exhaustion, caused by overwork or over-indulgence of various sorts.

But, whatever the cause may be, the curative effect of galvanic electricity is the same—promoting normal action of the blood and digestive organs, and removing local congestion by electrolytic action.

The secondary head attachment of my Electric Herculex appliance, shown on page 38, is a result of long and careful study of these maladies, and will be found efficacious in nearly every instance.

NERVOUS DEBILITY

MAY be defined as Nature's invariable punishment for wasted vitality, for the loss of strength which has been prodigally gambled away under the impression that the reserve fund of it would last for ever.

In order to secure a regular growth and preservation of the human system for a term of years far longer than the modern span of life, Nature stores up in the body of every young man and woman an amount of vital energy largely in excess of their daily needs. And this superabundance of reserve strength, stored under pressure, as it were, is constantly seeking an escape valve or outlet through which to work off its surplus. When the average small boy awakens the neighbourhood with fiendish howls, in the broad daylight of a city forenoon, he does so merely and solely because he feels well—not because he is crazy or villainously inclined. And public opinion regulates the nuisance at a point where the vocal exercise stops being good for him, and injury from wasted energy begins. But when he gets a few years older and, after pursuing sufficiently active occupations all day, sits up until four in the morning over bottles and cards, just to demonstrate the infallibility of his royal health, abused nature begins to even the thing up. Sooner or later he pays for his fun in a broken constitution. Also, the girl with the “iron constitution of perfect health”—the girl who shops all the morning, plays golf or skates in frosty air all the afternoon, and dances from 9 P.M. to 3 A.M., draws from her account with dame nature the vitality which was deposited to secure her comfort in advanced age.

Beyond the above-mentioned indiscretions, however, which are but a few of those thoughtlessly indulged in by almost every young person, there are others into which youth is drawn as innocently, unintentionally and ignorantly but which leave a heavier burden of suffering and weakness to be carried during the declining years.

These being of a more or less private nature, I have thought best to discuss more fully in a separate pamphlet, entitled “*Strength, Its Use and Abuse by Men*,” which I send in a plain, sealed envelope to men who desire personal advice upon the subject.

The word "intemperance" covers, in a general sense, all the principal causes of nervous debility, whether its application has reference to the abuse of stimulants, exercise, the marital relations, or of one's mind and body. "Temperance" does not mean "abstinence," but on the contrary, a *reasonable* use of all the good things with which Nature has provided us—not the *abuse* of them. The man or woman who has always lived a temperate life may reasonably expect to reach the hundred year mark. But those who have squandered their youthful strength, no matter how, in youthful intemperance, always pay the penalty in after-years of physical breakdown which nothing will remedy but an actual restoration of the vital force which has become exhausted, *and this restoration of vital strength is accomplished only by means of the electric current, administered through such an appliance as my perfect Electric Herculex.*

In other portions of this treatise I have explained at length the relation between the vital spark of life itself and electricity, so that it is scarcely necessary for me to reiterate the belief that the two are so nearly identical as to produce almost exactly the same result when presents in the human system.

That galvanic electricity, properly applied, will in every instance restore much of the energy that has been wasted by imprudent and reckless living, by any species of dissipation in man or woman, is a fact which I have proved in thousands of cases.



THE GENERAL RELATION OF ELECTRICITY TO HEALTH, AND THE ATTITUDE OF THE MEDICAL PROFESSION TOWARD IT.

IN THE foregoing articles I have outlined the nature of electric currents and the vital spark in human life which they both resemble and reinforce. I have also covered the field of galvanic treatment, by means of my Electric Herculex appliances, in the more usual ailments sufficiently, I think, to point out the way whereby many sufferers yet unknown to me may obtain grateful relief and cure. In fact, it is not likely that any intelligent sufferer or even persons in good health will fail to appreciate, after reading this treatise, the immense progress which has been made in the science of healing during the last quarter century—particularly in the branch of electro-therapeutics.

I have more than once stated in these pages that electricity so closely approaches the vital principle of life itself as to be almost identical with it in its motive power over the human system. And my experience leads me to further believe that the mere presence of normal vitality in a person is an indication, as a voltmeter or an am-meter, of the presence of just so much actual electricity in his body. Drain off any portion of this electricity, by any means, and you leave the man perceptibly weaker. Rob him of his normal amount of sleep, fresh air, exercise, or food, and you give his electro-vitality no chance to recuperate and recharge his system—just as in the familiar, everyday case of an open-circuit battery cell, keeping it connected in a closed or active condition for more than its proper limit of time will exhaust its “quantity,” or strength, so quickly that the instrument which it is intended to operate will fail to work. Yet, allow it to rest for a few hours in open, recuperative condition, and its strength will be as powerful as ever.

This seems a fair illustration of the power of recuperation in the human body, *if it is given a fair chance*. The trouble is that when a man once begins to overtax and abuse his strength, he keeps everlastingly at it until his power of natural recuperation has become exhausted, like a battery cell in which the chemicals have been used until they are worthless. If you charge the battery with fresh chemicals, it is as good as new. And if you recharge the man with his electro-vitality, the *man* is almost as good as new. *But you can't do it with drugs* any more than you can dose a battery cell with paregoric and make it ring a burglar alarm.

In order to maintain reserve strength for the daily needs of life and keep an even balance between waste and repair, a proper amount of sleep, food, fresh air and exercise are absolutely necessary. Cut any one of these short, attempt to tamper with them beyond a certain point, and you disturb the balance; the reserve strength is gradually exhausted, and, after a while, illness and chronic invalidism are bound to result.

But in galvanic currents we have a remedy for even the most reckless waste. Electricity is both tonic and sedative. It soothes and quiets the nerves the moment they are brought within its influence. It re-

stores normal action in the stomach, lungs, heart, liver, kidneys, bladder, uterus, ovaries and all the muscles. It chemically purifies the blood, disinfected whatever impurities there may be in the system and assists the proper organs to throw them off through the proper channels. It relieves local pain and soreness by removing the causes which produce them. And it strengthens and tones up the entire system in a way that nothing else known to science will.

During my researches in, and practice of, electro-therapeutics, it was for a long time difficult for me to conquer the prejudice of the medical profession at large against a system of treatment which was entirely independent of drugs. They took



the ground. many of them, that treatment by electric currents alone was inimical to the science of healing.

But that is all changed now. The physician of to-day who fails to prescribe galvano-electric treatment in cases which distinctly call for it proves himself to be behind the times in his profession. And the only difference between the general practitioner and myself lies in our methods and charges for treatment. *He* prescribes drugs for his patients at an expense of \$3, \$5, \$10, or \$25 for each visit, and as long as there is any indication of illness continues these visits—while *I* charge nothing for consultation, either at my office or by mail. Comparisons, however, are often misleading. The up-to-date family physician is a safeguard whom no community would willingly do without—whom no sensible head of a family would dare to be without—and both he and I work heartily together for the health and happiness of our patients. But my treatment is practically within the reach of the poorest man in this or any other country. while the medico's services, though many times given gratuitously, must of necessity be sufficiently remunerative to support himself and family, from a comparatively limited area of practice.

And this brings us to an explanation of my Electric Herculex appliances themselves, the manner of attaching them to the body, instructions for ascertaining the required form and strength, or for diagnosing the patient's condition, if at a distance, with prices, mailing directions, etc.

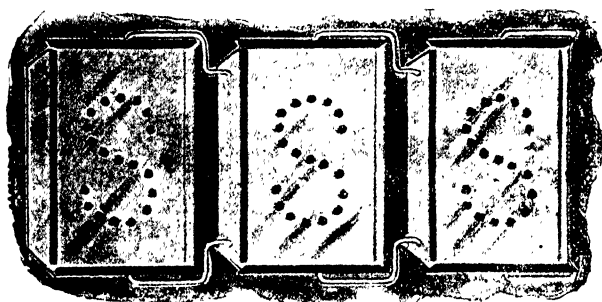
ELECTRIC HERCULEX APPLIANCE.

THE most important feature of my Herculex Appliance is, of course, the generating cell by means of which a safe and beneficial galvanic current is produced. And the construction of this battery cell, so that it will be thoroughly effective under all conditions, yet sufficiently compact to be worn under the clothing without inconvenience, is an operation requiring skilled workmanship of the highest order, as will be seen from the accompanying illustration in which I wish to call particular attention to the pieces of black vulcanized rubber which are fitted into the top and bottom of the cell. These pieces of vulcanized rubber form the only perfect insulation—the only means of absolutely preventing loss of battery strength—ever perfected for an electric body appliance. Any appliance without this insulation will lose its strength in a few days. My patents protect this insulator in every country.

These cells, varying according to the amount of current required for different ailments, are properly coupled together and attached to the *primary Herculex Appliance*, which is worn

about the waist and which is provided with additional insulating material that protects the cells at every point.

From the positive pole of the last cell an insulated connecting cord is carried to the two large electrodes which are attached to the inner side of the primary appliance in such a position that they rest upon the skin, at the small of the back, directly over the kidneys and main nerve centre of the body. While from the negative pole of the first cell, similar connecting cords of varying lengths are carried to the electrodes of *secondary attachments*, which rest upon different portions of the body or limbs according to the nature of the trouble with which the patient is afflicted.



SECTION OF STANDARD POWER BATTERY D, NO. 7 ELECTRIC HERCULEX.

My experience with thousands of cases has led me to place the main generating power at the waist line for obvious reasons. The most important motor nerves of the body, those controlling the sexual and digestive organs, are situated in the lumbar region near the base of the spine, from which centre they control the more vital portions of the human system. Beyond this, although the Electric Herculex is neither bulky nor heavy, the waist is by far the most convenient location for any attachment which is to be worn underneath the clothing without interfering with the patient's regular occupations.

The electrodes, shown in the cuts by round metal discs, are the only electrified portions of the appliance which come in contact with the skin at any point, and, to avoid the possibility of soreness or irritation, each of these is provided with an anti-septic covering which transmits the current freely without permitting actual contact between flesh and metal, so that it is impossible to injure the most sensitive skin.

From the foregoing description, and the accompanying cuts, it will be readily understood that in my application of galvanic electricity, the large positive electrodes of the *primary Herculex*, located at the small of the back, are the main sources from which

the galvanic fluid proceeds through the body to the negative electrodes of the *secondary appliances*, worn over or in line with the afflicted parts. Thus, in cases of rheumatism, the secondary electrode would be worn at the wrist, elbow, ankle or knee—in bronchial or lung troubles, either at the front or back of the neck—in neuralgia, upon the cheek just forward of the ear—in troubles of the feet, under the sole—and in troubles of the liver, kidneys, bladder, ovaries, uterus or blood, or for lame, weak back, etc., upon the abdomen, just below the navel, the current in each case passing through the disease centres from positive to negative electrodes.

Further than this I do not wish to give specific directions for application of my Electric Herculex Appliances, because the features of individual complaints vary so greatly. In each case I wish the patient to write me fully in regard to his condition, so that I may use proper judgment both in selection of the appliance best suited to him, and instructions as to its adjustment upon his body.

The charging of the battery cells, however, is so simple a matter that even those who are unfamiliar with the chemical production of electric currents will readily understand it.

In order to spare our patients the necessity of handling more or less injurious chemicals, we have so constructed the elements of our cells that they will readily decompose under the action of acetic acid (a large percentage of which is contained in table vinegar). It is, therefore, only necessary upon the receipt of the Herculex to detach the chain of battery cells from the waist attachment, soak them in a bath of vinegar and water for a few moments, dry them and re-attach as before—the Herculex then being ready for use.

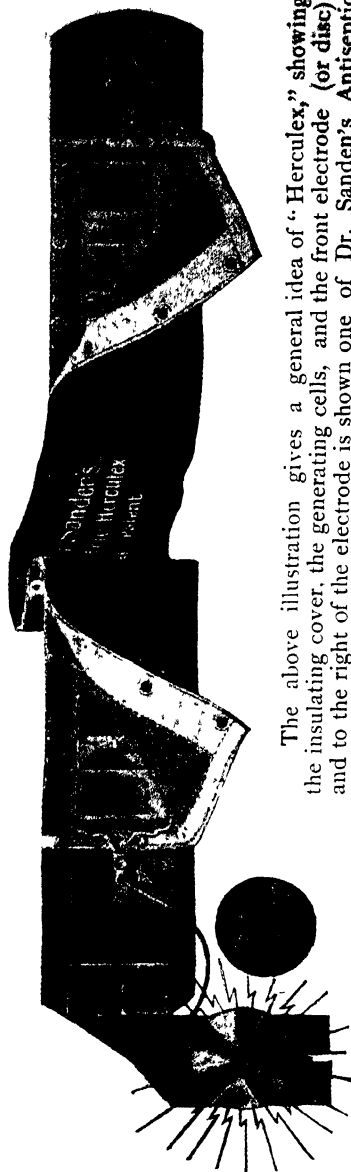
FACTORY



FRONT VIEW.

DR. SANDEN'S ELECTRIC HERCULEX.

For price list, etc., see page 45.

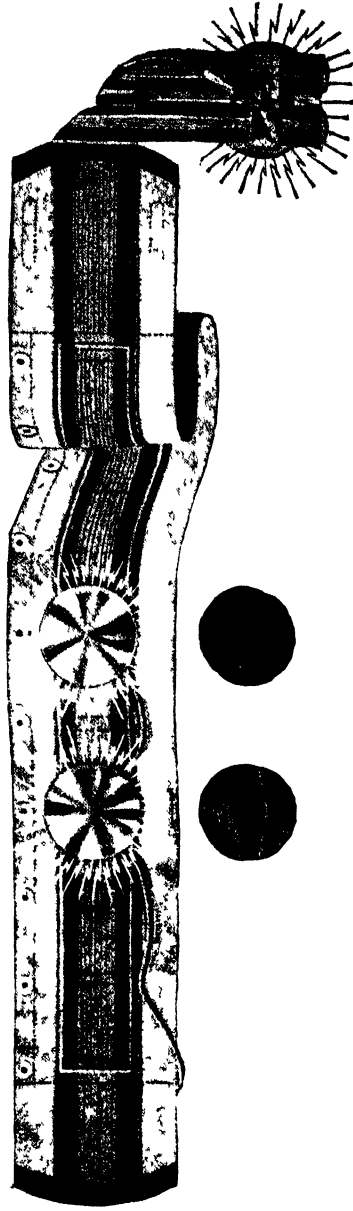


The above illustration gives a general idea of "Herculex," showing the insulating cover, the generating cells, and the front electrode (or disc), and to the right of the electrode is shown one of Dr. Sanden's Antiseptic Disc Covers. There is no system of home treatment by electricity to be had anywhere or at any price which approaches "Herculex." It is perfectly safe and efficient, even when used by those who have no knowledge of electricity, a feature which supplies a long-felt want in the self-application of this wonderful power. For illustrations and list of attachments, including the male attachment, and which is furnished free with "Herculex," see pages 38 and 41.

BACK VIEW.

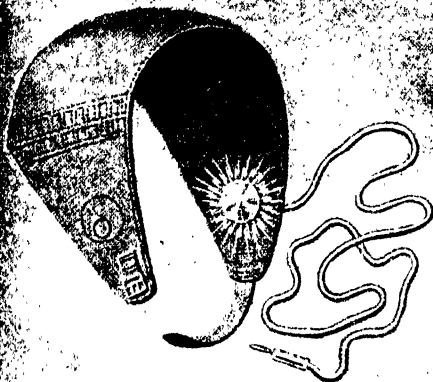
DR. SANDEN'S ELECTRIC HERCULEX.

For price list, etc., see page 45

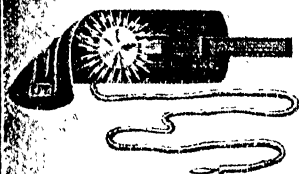


This illustration shows the reverse side of the insulating cover and the two back electrodes (or discs), also two of Dr. Sanden's Antiseptic Disc Covers, used on all Herculex Appliances. If you have ever seen or used an electric body battery (so-called) of any other make, a comparison with "Herculex" will at once dispose of all doubt of its superiority which may exist in your mind.

SECONDARY ATTACHMENTS



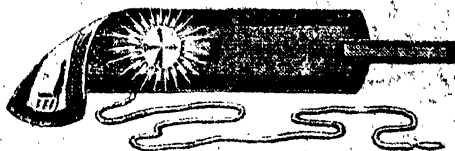
HEAD ATTACHMENT.



WRIST OR ARM ATTACHMENT.



FOOT ATTACHMENT.



ANKLE OR LEG ATTACHMENT.



NECK OR SPINAL ATTACHMENT.

USE OF ATTACHMENTS

FURNISHED FREE

WITH EACH APPLIANCE.

The illustrations on the foregoing page give you a fair idea of the general appearance of some of the principal secondary attachment used with the Electric Herculex.

Head Attachment. Used for neuralgia of the face and kindred pains.

Foot Attachment. Applied in cases of rheumatism of the feet, rheumatic gout, locomotor ataxia, cold or perspiring feet, etc.

Neck Attachment. This attachment serves for the treatment of a number of complaints, among which are nervous headaches, bronchitis and pain at base of brain.

Leg Attachment. Serviceable in treating rheumatism of the legs or thighs, sciatica, locomotor ataxia, varicose veins, paralysis, etc.

Arm Attachment. Used for rheumatism of the arm or shoulder, paralysis, neuralgia, etc.

Special Attachment. For sexual disorders in both sexes arranged as the case may require. Attachments made and arranged to suit each individual case treated, without extra charge.

The price of the Herculex includes secondary attachments used, and all advice and assistance during treatment.

HOW AND WHEN ELECTRIC HERCULEX IS WORN.

HERCULEX is not to be confounded with electric belts, bands, girdles, etc. It is different entirely from anything on the market, but for convenience sake, it is worn upon the body in a position as indicated by the two crosses (XX) in the illustration shown below.

The white lines indicate the insulated wire connections which carry the electric current from the battery to the head, foot, neck, leg or arm attachments. Herculex offers no inconvenience, makes no noise, and cannot be felt or detected by those who may come in contact with the wearer. It is as comfortable and as easily adjusted as your clothing, and does not interfere with sleep or ordinary household duties.

The wearer may read, write or entertain friends while the Herculex does its work without the least inconvenience or annoyance. The black dotted lines in illustration on page 41 show position of Herculex as worn by women, while the other illustration on page 41 shows position of leg, arm and neck attachments.

If your duties are light and not arduous, Herculex may be worn during the day, but the results are more satisfactory when it is used during a period of rest in the evening, or upon retiring, at night. If worn for an hour or two before retiring, "Herculex" will induce refreshing, unbroken sleep, the beneficial effects of which will be felt during the following day.





THE DOTTED BLACK LINES
IN THIS ILLUSTRATION SHOW
POSITION OF "HERCULEX"
AS WORN BY WOMEN.

THIS ILLUSTRATION
SHOWS POSITIONS OF
NECK, LEG, AND ARM
ATTACHMENTS, THE CON-
DUCTING ELECTRODES
BEING ATTACHED TO THE
PRIMARY "HERCULEX"
UNDER THE CLOTHING.



THE TAX OF EXCESS AND OVERWORK.

AS a rule, disease and weakness are the direct or indirect result of indiscretion, overwork or exposure. For every transgression of common sense or natural law, Nature imposes an inevitable and sometimes terrible tax upon the "working capital" or operating force of the individual. When this becomes exhausted, as in many cases it does, she draws upon the reserve force and this marks the beginning of the collapse of the vital supply centres and the under-mining of the constitution.

That this is true, requires no argument from me, for every man and woman who thinks, KNOWS IT, but somehow or other it is overlooked or forgotten in the rush for fortune or the battle for existence.

We go along through life unconscious that we are responsible to any power, but ourselves, seeming only to strive to satisfy our desires and with an utter indifference toward our responsibility to Nature. When we realize that our health is failing, our strength slipping away and that our capacity for work and enjoyment is growing less every day, we are apt to blame the weather, our food, or the "unhealthy neighbourhood" or lack of proper exercise, etc., but we seldom place the blame where it belongs—in ourselves. We forget the hours and days in which we abused our natural supply of vitality in one way or another. We don't remember that during many of these hours, and even days we compelled our organic machinery to do more work, and hence to expend more energy, than, under natural conditions, would be used in several days or weeks.

Every organ, every faculty in our wonderful system was made and intended by Nature to last a life-time, in a good healthy condition. None were made with the expectation of serving only through a short life. All of them, however, are *limited* to do a certain amount of work in a given time, and no more. Any breach of moderation in the use of our functional activities, imposes a tax that has got to be paid then and there—and the tax is payable only in the identical force required to commit the indiscretion, excess, or withstand the overwork, whether it be done wantonly, unavoidably or unknowingly.

Consider if you will, the "repair work" going on in every quarter of the globe, and you will find that in every instance

where restoration is possible, both Nature and man restores the weak part or parts with the very thing or force which has been wasted or is lacking.

When you are hungry or thirsty, you eat bread, meat or vegetables, and drink water, not because you like them, but because in bread, meat and vegetables are found the very elements your system lacks when you are hungry and in water the very elements—the absence of which causes thirst.

It is exactly so in every department of life and why should not the same law hold good with regard to our health and strength?

For about forty years I have made Electricity the study of my life. I succeeded many years ago in inventing a safe and reliable system of applying this natural force to the body and thus giving to the weak and struggling organs the power to properly perform the work set apart for them by Nature. I continued to improve upon my first idea until to-day I have perfected an Electric Appliance which is second only to Nature Herself in maintaining a condition of health and strength and vigorous action throughout the human system.

The results accomplished by my latest improved battery and connections are wonderful, in that they are for the most part, obtained in cases which were considered hopeless and which had refused to respond to all manner of drug treatment, for months and sometimes years, previous to my taking them for treatment.

A man comes to me to-day with a severe pain in the back and to-morrow he calls or writes telling me that he has experienced such marked improvement that he can hardly accept it as real.

A nervous sufferer who having lost faith in every remedy (but who feels that he must do something), applies in a half-hearted, indifferent manner, for information concerning my system of treatment. After receiving my books and a host of signed testimony, he finally, and as a last resort, concludes to purchase an appliance. He doesn't believe in it to any extent, but feels that it is his last chance, as he has used every other known remedy without success.

After wearing the appliance for a few days and following my simple directions, he begins to notice a change for the better, although he is still reluctant to believe that it will cure him. He feels encouraged, however, and before long it dawns upon him, that, sure enough, he is improving, slowly, though

surely, and being unable to contain himself, he comes to see me or writes to me, in sheer thankfulness of heart over the change that has taken place. The world puts on a new aspect for this man who a short time since, saw only darkness. Later on he writes me that he is entirely cured and from the fulness of his new existence he thanks me and adds that he will always recommend my treatment to his friends and acquaintances, and he does it, as my testimonials will show.

The rheumatic, unable to work or even to walk, buys an appliance upon my advice or perhaps upon the advice of a friend and after using it faithfully for a few days, finds relief, such as he had hardly hoped for. His stomach, liver and kidneys begin to do their work properly, in response to the new impetus of life infused into the nerve centres, thus purifying the blood and purging the system of the uric acid poison which is the real cause of rheumatism. In ninety-nine cases out of every hundred the rheumatic sufferer reports that he has been cured and is once more able to work and enjoy life.

There are few diseases from which men and women suffer, that do not originate or take root in a weakened system and in nearly every case men and women weaken their systems through indiscretion, excess or overwork.

Galvanic Electricity will not only increase your nervous force and animal vitality, but it will stop any further waste or drain upon the system. The brain will become refreshed and the entire organic structure will respond to the new condition in a natural and vigorous action of each and every part.

If you are willing to do your part, Galvanic Electricity will do the rest safely and surely. One night's use of Electric Herculex will effect a change that will encourage you and fill you with confidence and hope, such as is not possible through any other means of treatment.

PRICE LIST.

DR. SANDEN'S ELECTRIC HERCULEX.

	PRICES.
Dr. Sanden's Electric Herculex No. 1 ...	Rs. 15
Dr. Sanden's Electric Herculex No. 2 ...	,, 30
Dr. Sanden's Electric Herculex No. 3 ...	,, 45
Dr. Sanden's Electric Herculex No. 4 ...	,, 60
Dr. Sanden's Electric Herculex No. 5 ...	,, 75
Dr. Sanden's Electric Herculex No. 6 ...	,, 105
Dr. Sanden's Electric Herculex No. 7 ...	,, 135
Dr. Sanden's Electric Herculex No. 8 ...	,, 225
Dr. Sanden's Electric Herculex Special ...	,, 375

Special Appliances and Attachments for Exceptional Cases.

The object of Herculex is to restore the animal electricity (which has been wasted through excess or overwork) to the nerve and motor centres, and thus to promote a natural organic action throughout the system. As animal electricity (the force of life) may be applied from the strongest Herculex battery with perfect safety and the most natural results, by even those who have no knowledge of electricity; and, also, as the human system requires a surplus of animal electricity to ensure health and strength, it follows that the stronger the battery the quicker and more certain will be the results. The highest standard power battery will cost you considerably less than the fees and medicines of an average doctor, and, what is of utmost importance, is absolutely harmless. Send a statement of your case, and I will, upon diagnosis of your trouble, prescribe the proper appliance. Any one of the attachments described in my book "Health in Nature" furnished free with each appliance.

Address all letters to either **THE SANDEN ELECTRIC**
Co., or DR. A. T. SANDEN.

ELECTRIC HERCULEX APPLIANCES NEVER SHOCK.

ONE of the impressions which causes many sufferers to hesitate before trying any kind of electric treatment is the fear of receiving a dangerous or highly uncomfortable shock from its application. And this arises very largely, from experience with the cheap and worthless medical batteries, so called, which are offered for sale by thousands of dealers who make no pretence to any scientific knowledge of either medicine or electricity.

But, as I have explained in a previous article, the galvanic current, which is the only one I use in my Electric Herculex, has absolutely none of this irritating or shocking quality, which belongs exclusively to the Faradic current.

The sensation produced by my appliance is one of pleasant and soothing warmth.

ALL ADVICE FREE.

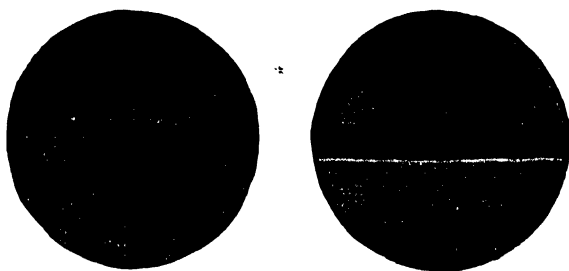
IN considering the advisability of adopting my treatment I wish to thoroughly impress upon every sufferer the fact that his or her expenditure for my Electric *Herculex* Appliance covers, also, the professional advice of an experienced specialist—and that such advice is at their disposal free of charge until a cure is effected.

In order that there shall be as little delay as possible in communicating with my patients, and for the convenience of those who wish to avail themselves of a personal consultation with me or the associate physicians of my staff, I maintain thoroughly equipped offices in nearly every large city throughout the world, where we have every facility for demonstrating in practical way the use of electricity as a curative element.

TESTIMONIALS.

The *bonâ fide* testimonials which I constantly receive would more than fill the pages of a large monthly magazine, but I only select and publish, by permission, a few from different sections, embracing the majority of diseases for which my appliance is a specific remedy—preferring to place those interested in my

treatment in personal communication with others who have been cured by it.



DR. SANDEN'S ANTISEPTIC DISC COVERS.

Perfect conductors of electricity, which prevent burning, blistering or irritation to the skin. Practically adjustable, and used only on the Dr. Sanden's appliances. An innovation readily appreciated by all who have applied electricity from bare metal electrodes. Beware of imitations.

WHEN ORDERING

Do not forget to give your waist-measure taken from the small of the back over the hips and navel. No appliance is sent unless ordered. If so desired the Herculex will be sent by V. P. P. or on receipt of Money Order or Cheque.

THE SANDEN ELECTRIC COMPANY.

CALCUTTA, 7/1, Wellesley Place.

BOMBAY, 75, Hornby Road.

MADRAS, 162, Mount Road.

RANGOON, 94, Dalhousie Street.

London : 15, Hanover Street.

Paris : 14, Rue Taitbout.

Brussels : 89, Rue de Marche aux Herbes.

Amsterdam : 3, Damstraat.

Stockholm : 26, Malmiskilnadgatan.

Barcelona : 57, Calle Fernando

Johannesburg : President & Eloff Streets.

Yokohama : Japan.

New York : 1151, Broadway.

Buenos Aires : 105, Artes.

Montevideo : 122, 18de Julio.

Rio de Janeiro : 22, Largo da Carioca.

Santiago de Chili : 123, Estado.

Capetown : 12, Pleinstreet.

San Francisco : Market Street.

Hong-Kong : China.

\$5,000 GUARANTEE

Under a forfeit of \$5,000, I guarantee the Dr. Sanden Electric Herculex Appliances to be self-applied galvanic batteries for body wear, constructed upon the highest scientific lines in accordance with my claims, and that each will generate currents which will be instantly felt upon adjustment to the body.

The Sanden Electric Company,
Dr. A. T. Sanden, *President.*

Sworn to this twenty-first day of May,

A. D., 1900.

{ S E A L }

Edwin R. Haynes,
Justice of the Peace.

