

Electro-therapeutic hand book : with full directions for home treatment of nearly all diseases that can be cured or relieved by the application of electricity / compiled by Edward Trevert.

Contributors

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ELECTRO-

THERAPEUTIC

HAND BOOK



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ELECTRO-

THERAPEUTIC

HAND BOOK

WITH FULL DIRECTIONS FOR HOME TREATMENT
OF NEARLY ALL DISEASES THAT CAN BE
CURED OR RELIEVED BY THE
APPLICATION OF ELECTRICITY

Compiled by EDWARD TREVERT

PUBLISHED BY
MANHATTAN ELECTRICAL SUPPLY CO.

NEW YORK

CHICAGO

ST. LOUIS

SAN FRANCISCO.

PREFACE.

NATURE effects all cures. Medicine, care, nursing and diet simply aid nature in the healing process.

Many drugs are poisonous and therefore harmful ; hence the argument in favor of Electrical treatments. Electricity does nearly all that drugs can do and leaves no poison behind in the system. It is both a tonic and sedative. Properly used, it is a safe remedy that can be placed in the hands of any person of ordinary intelligence. Science knows only cold facts : it knows nothing of superstition and performs no miracles. It has no secrets. What knowledge it gains, it gives to the world for the benefit of all.

This little book is only a treatise, in simple language of the best treatments by electricity that can be obtained from the leading authorities of to-day. It is in no sense to be considered a technical treatise but only a simple guide to electrical treatments, that can be placed in the hands of the layman.

Hoping that it may add its ^{note to the list of books} already published on the subject, is the wish of the author,

Edward T. Bennett

INTRODUCTION

The peculiar force called electricity was discovered over two thousand years ago.

This energy had been a part of nature since the creation, but the learned philosophers of that day were unable to explain the laws which governed this curious phenomena, or to utilize it for any practical purpose.

Otto Von Guericke made the first electrical machine. It consisted of a ball of sulphur, so attached to a revolving part that when a crank was turned the ball revolved. When the hand or some other substance was held against the sulphur it became electrified. A glass ball, glass cylinder and a glass disc against which rubbers were placed, were afterwards revolved thereby generating electric currents. These were the first principles of the Frictional Machine.

Galvani discovered a new source of electricity in the twitching of a frog's legs, which hung across two pieces of different metals.

Volta was attracted by Galvani's discoveries and immediately instituted a series of experiments. He found that two different metals were essential in the production of the "new electricity" as he called it and he constructed the voltaic pile, which was composed of silver coins and pieces of zinc, with moistened paper placed between them. And with this arrangement he found it possible to produce all the effects of electricity which were obtained by friction on glass, amber or sulphur.

He very soon improved the "pile" by substituting metal strips in cups of acidulated water. This constituted the first voltaic battery.

Sturgeon constructed the first electro magnet. He wound several turns of bare copper wire upon a bar of iron; simply insulating the wire by wrapping it with cotton or some other material.

Faraday discovered electro-induction. Namely that induced currents of electricity could be produced in a closed coil of wire by

means of currents, started or stopped in a neighboring coil. He also induced currents in coils by moving them across a magnetic field. These currents are called secondary currents.

A magnetic field is the space around a magnet, pervaded with the lines of force. Every magnet and every conductor carrying an electric current has a magnetic field, or field of force, as it is called, that is lines of magnetic force, traveling around and through it. Faraday in making this discovery, gave to the world a form of current, highly esteemed and utilized to a great extent in medicine.

All medical batteries are made on the foregoing principles.

It is not certain when electricity began to be used as a therapeutic measure. The attempts to use electricity in medicine, date back as far as the knowledge of the phenomena itself. Thus it is related that women of ancient Greece wore necklaces of amber as a charm against disease. It is also said that women of West Africa, from early times were accustomed to place their sick children in pools of water where abounded the electric fish, in the hopes that thereby they might be cured.

It was not until the middle of the eighteenth century that electricity was much used as a therapeutic measure. The first records of electrical treatments in a London hospital were made in 1767.

In 1773 a favorable report of its use was made to the Royal Society in France. Ten years later it was introduced into another London hospital. Afterwards it was used in Grey's hospital with considerable success.

Among the diseases mentioned, as having been successfully treated were, chorea, epilepsy, chronic rheumatism and enlarged glands.

At the present day it is used in almost every hospital in the civilized world, in the treatment of a large number of diseases.

The directions contained in this book will enable any person to operate our medical battery with perfect success.

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CONTENTS.

CHAPTER I.

METHODS OF APPLYING ELECTRICITY.

Primary and Secondary Currents.....	9
General and Localized Electrization.....	10
Diagnosis.....	11
Rules Governing the Use of a Battery.....	17
Instructions for Attaching Electrodes to Battery.....	20
Care of a Battery.....	20

CHAPTER II.

TREATMENT OF DISEASES.

Abscess.....	21
Acne.....	21
Ataxia.....	21
Apoplexy.....	23
Asthma.....	24
Anus—Falling of the.....	24
“ Induration of.....	25
Back—Weak or Lamé.....	25
Bowels—Looseness of the.....	25
“ Constipation of the.....	26
“ Inflammation of the.....	26
Brain.....	26
Bladder—Diseases of the.....	27
“ Retention of Urine.....	28
“ Paralysis of.....	28
“ Inflammation of.....	28
Bronchitis.....	28
Bright's Disease.....	29
Bed Sores.....	30
Burns.....	30
Cancer.....	30

6 ELECTRO-THERAPEUTIC HAND BOOK.
CONTENTS—Continued.

Corns.....	31
Chilblains	31
Change of Life.....	32
Cholera Infantum.....	32
Cholera.....	33
Colds.....	33
Catarrhal Cold in the Head.....	34
Carbuncles	35
Canker	35
Cramps.....	36
Cramp—Writer's	36
Cold Feet.....	37
Contracted Muscles	37
Catarrh—Acute and Chronic	38
Croup.....	38
Cough—Nervous.....	39
Consumption.....	39
Cholera Morbus.....	41
Deafness,.....	41
Diphtheria.....	42
Diarrhea.....	43
Dyspepsia.....	43
Dropsy.....	44
Diabetes.....	44
Debility—General.....	45
Death—Apparent	45
Eczema	46
Enlarged Glands.....	46
Ear Ache.....	46
Epilepsy.....	46
Eye	47
“ —Inflammation of.....	47
Eyelid—Granulated.....	48
“ Spasm.....	48
“ Paralysis Upper.....	49
Eye—Ulceration.....	48
“ Ptosis.....	48
“ Cataract.....	49
“ Obstruction Lachrymal Duct.....	49
“ Opacity or Film.....	49
Felon.....	50
Flatulence.....	50

CONTENTS—Continued.

Fever	51
" —Scarlet.....	52
" and Ague.....	52
" Intermittant	53
Gout—Rheumatic.....	53
Goitres.....	53
Headache	54
Hysteria	55
Hernia	55
Hiccough.....	55
Hay Fever	55
Hip Joint Disease.. ..	56
Indigestion.....	56
Insomnia.....	56
Jaundice	57
Kidneys—Inflammation of	57
Liver—Inflammation of.....	57
" Enlargement of.....	58
" Sluggish	58
Leucorrhœa	58
Loss of Smell	59
Lungs—Inflammation of.....	59
Loss of Voice	59
Melancholia	59
Measles.....	60
Menstruation—Suppressed	60
" Painful.....	61
" Retarded.....	61
" Too Copious.....	61
Miscarriage	62
Nipples—Sore.....	62
Neuralgia.....	62
Nose—Hemorrhage.....	63
Obesity.....	63
Ovaries—Inflammation of.....	63
Ovarian Tumor.....	64
Obstruction.....	64
Ozoena.....	64
Pregnancy.....	65
Paralysis.....	65
" of Bladder.....	66
Pleurisy	66

CONTENTS—Continued.

Piles	67
Polypus.....	67
Rheumatism—Acute.....	68
Rheumatism—Chronic.....	68
Rickets.....	69
Ringworm.....	69
Scrofula.....	69
Sunstroke	70
Spinal Irritation.....	70
Sciatica	71
Spleen—Enlargement or Inflammation of.....	72
Spine—Inflammation of.....	72
Spine—Curvature of.....	72
Stammering	73
Stomach—Inflammation of.....	73
Shaking Palsy.....	74
St. Vitus Dance.....	74
Talites (Club Foot).....	74
Tetanus (Lockjaw).....	74
Toothache	75
Tooth—Ulcerated	75
Urine—Retention of.....	75
Uterus—Prolapsus of.....	75
“ Ulceration of.....	76
“ Induration of.....	77
“ Inflammation of.....	77
Vomiting	77
Wry Neck.....	78
Whitlows (Felons).....	78
White Swelling.....	78
Worms.....	79
Wounds—Inflamed.....	79
Weak Stomach.....	79
Water Brash	79
Weak Lungs.....	80
Weak Ankles.....	80
The Electric Bath.....	81

CHAPTER I.

METHODS OF APPLYING ELECTRICITY.

NO absolute rule can be made for the treatment of disease. The general one is to treat diseases of an inflammatory nature and fevers with the positive pole. For example, swellings, bruises, sprains, extraneous growths and enlarged glands.

In this treatment arrange the poles, if possible, the positive above the negative: while in debility, numbness, inaction, tendency to decomposition, is treated with the negative pole. In this treatment, the rule of the positive above the negative cannot always be followed.

PRIMARY AND SECONDARY CURRENTS.

There are two currents that can be used with the Medical Apparatus: namely, the primary and the secondary.

The primary current **starts at the dry cell.**

passes through one coil of wire (primary coil) thence through the circuit breaker through the patient.

The secondary is the induced current in the finer wire of the coil and is of much greater tension than the primary but not of so much volume.

The primary current is used particularly in the treatment of scrofula, ulcers, cancers, extraneous growths, enlarged tonsils, enlarged joints, granulated eyelids, enlarged glands, strictures, etc.

The secondary current is applied in the cure of nervous and inflammatory diseases and acts as a tonic upon the system.

There are two methods of applying the currents of electricity to the body, viz.:

1. General Electrization.
2. Localized Electrization.

By the first method, the current is passed through the entire body or part of it. By the second method, the object is to influence special nerves, muscles or organs, limiting the action of currents to these parts, or, instead of trying to influence a muscle, we may stimulate the nerve supplying it, thus reaching the same end indirectly.

When the refreshing effects of the current is desired to relieve fatigue or ward off approaching paralysis, some suitable exercise of the muscles should be combined with the galvanic current.

General faradization may be resorted to, to relieve the fatigue that comes from inaction, the result of sedentary habits, as with business and professional men, and many others. The current thus supplied imparts new life and vigor. It exhilarates, it strengthens, it soothes, and tranquillizes the most nervous organism, and thus brings sleep.—“Tired nature’s sweet restorer.”

DIAGNOSIS:

In giving treatment, it sometimes happens that a person is at a loss to know which pole to apply, to the diseased part. In such a case they will be considerably assisted by testing the sensibility of the diseased parts to the current.

This sensibility is very marked, in many instances one may detect by it, not only the organ, but the particular part of the organ where lies the most irritation: The parts being much more sensitive to the current, than to the hand.

To make an examination of the internal organs, proceed as follows: Attach the sponge electrode to the wooden handle and connect them to the positive pole of the battery. The sponge and also the surface of the body, under examination, should be moistened. Now place the sponge, opposite, or a little above the diseased part, pass the fingers of the other hand which holds the negative element, with a firm pressure, over the organ supposed to be diseased and as was said before, the diseased portion will be found much more sensitive to the current than it would in a normal condition.

There is much in the proper adaptation of the remedy to the conditions to be relieved. In the treatment of the muscular system more of the stimulating action of the current is required, while the nervous system needs more of its sedative action. With some persons it is not electricity but electrization that is required. Not a part but the entire system needs to be brought under the influence of electricity. This is accomplished in the following manner: The patient is seated upon a stool or chair, with one pole of the battery at his feet, or at the lower end of his spine, while **the other is applied over the surface of the**

body. Preferably the feet of the patient are bared and rest upon a metallic plate electrode connected with the battery. The battery rests upon a stand or table in front of the patient, while the operator stands at his side or back. With one hand the operator grasps a sponge electrode, and with his free hand he applies the current to every part of the body of his patient.

The application is first made to the head, beginning at the forehead and passing backward to the neck, shoulders, upper and lower extremities, in their turn, until the whole body has been treated. The chest and extremities will bear a much stronger current than the head or heart. Caution is always required in making application in the regions of the brain and heart, lest the current be too strong or too prolonged. Care also, is to be exercised in the region of bony prominences, as here the current is more painful than elsewhere.

The strength of the current should never be sufficient to cause pain or fatigue, as these symptoms would indicate that an overdose had been given.

General electrization as above described is adapted to numerous conditions of life. It

is the remedy for that feeling of weariness that comes from overwork and for that state of nervous exhaustion which so often follows.

For deficient circulation, insomnia, and for all those states of debility where a stimulating or sedative tonic is required, it has few if any equals.

Examination of the spine may be made as follows: Place the negative at the base, a good way is to seat the patient on it. The operator should hold the positive in the hand and with a firm gentle pressure of the fingers examine each vertebra.

In the application of electricity in the treatment of diseases, more care and discretion are requisite. Here some knowledge of the science of medicine is implied and the unprofessional operator should proceed with extreme caution.

To indicate the action of electricity on diseases, a few selections may be made for the more common ones.

Anæmia, which is one of this class, is benefited by the tonic action of electricity. By stimulating the general circulation, it improves the nutrition and builds up the system. To obtain this result, it should be used by the

mode of general electrization, in suitable doses, and at frequent intervals. Thus, in conjunction with other tonics its value has been demonstrated in numerous cases.

In some diseases of the skin electricity is serviceable, especially those of a nervous origin which have resisted drug medication. The form best adapted is galvanism, the electrodes being moved about over the part affected. The same remedy may be successfully used in obstinate cases of eczema and acne.

There is no more troublesome or common complaint than dyspepsia, or one that oftener resists every effort to cure. This is especially true of the form called nervous dyspepsia; the evidences of which are manifested by a sensation of weight after meals, with a heavy, stupid feeling during the process of digestion, the patient often falling asleep when not occupied.

Under these conditions the use of the Faradic current over the stomach gives great relief. Through its influence not only the above symptoms are removed, but the spirits and the temper of the patient are changed. While one pole of the battery is placed over the stomach, the other may be placed on the spine opposite it. The electrode should be

moved about over the stomach, for ten to fifteen minutes, and repeated daily or oftener, as the case requires.

Sick or neuralgia headache is a complaint often resulting from hereditary tendencies, or associated with some critical period of life, etc. Among the secondary causes may be mentioned the influence of heat and cold, or some irritation or injury of a nerve. It is not difficult to recognize a headache of this kind, but its successful treatment is not so easy, and many failures of cure are recorded by ordinary treatment. Electricity is one of those remedies, which if properly applied, is capable of temporarily relieving, if it does not radically cure the complaint. The forms usually employed are the faradic and galvanic currents, and of the two the galvanic current is probably the more effective. The direction of the current is not a matter of much consequence, but it is important that the strength of the current should not be rapidly changed. The electrodes should be drawn slowly over the painful nerves, short applications and frequently repeated, is the rule. The action of faradism is explained by its counter-irritant effect, producing redness upon the skin when used for that effect.

The tonic effect of the current must not be overlooked, which is one of its most important uses.

Other measures may be required, as the removal of the cause, protection from the damp and chilly air, plenty of sleep at night, supplemented by suitable rest by day, together with nourishing food and plenty of it. In some cases anodyne medicines are demanded, but should be employed in moderation from the unpleasant effects liable to follow their use.

RULES GOVERNING THE USE OF A BATTERY.

There are certain general principles or rules that may guide in the use of a medical battery.

1st—It is important to have a definite form of treatment and to pursue it for some time. Whatever the disease may be, that is to be treated, learn beforehand, how the electric current should be applied and do not hastily change your method unless its inefficiency is demonstrated.

The tonic effect of electricity, like other tonics is slow in its action. Therefore, having decided upon the course to be pursued, it

should not be hastily abandoned. Thus the time element, in electrical treatment, like all other treatments, should be duly considered.

2nd—In commencing a treatment first learn the strength and effect of the current on yourself, before applying it to others. Thus you may avoid unnecessary inconvenience and loss of time to yourself and to your patient. There is no better test of the strength and quality of a current than in trying its effect on your own body first.

3rd—It is always advisable to commence with a mild current and gradually increase it to meet the requirements of the case. This is much pleasanter and more satisfactory, than would be the opposite method. It does not alarm your patient and having gained his confidence, your way is comparatively easy afterwards.

4th—Short sittings are better than long ones. In ordinary cases from two to eight minutes or at the outside fifteen minutes is long enough for a treatment. The exceptions to this rule are in the treatment of some chronic diseases, as chronic articular rheumatism, etc., and in general electrizations, where a little longer time might be allowed.

5th.—No definite rule as to the frequency of sitting, as much depends upon the nature of the disease, the sex, age and habits of the patient. Some acute cases require daily sittings, seldom more than that. In chronic cases from two to four times a week may be enough.

6th.—As to the continuance of treatment there is, also, no definite rule. Chronic cases need to be treated longer than acute cases, generally they would be treated as long as good results are visible. Obstinate cases require from two to six months, with occasional interruptions of the treatments and maybe, the addition of some internal remedies, such as the good judgment might suggest, combined with pure air and sunlight.

7th.—In using a galvanic battery, the sponge electrode should be used well moistened and pressed steadily upon the part to be treated, and the more steady the pressure of the electrode the more agreeable will be the sensation and the better the effect. It is very disagreeable to the patient to experience sudden and repeated shocks, by the unsteady or uneven pressure of the electrode. This is of especial importance in the treatment of neuralgias.

INSTRUCTIONS FOR ATTACHING ELECTRODES TO THE APPARATUS.

When primary current is wanted connect cords to sockets No. 1 and 2; when thus connected, No. 1 is positive and No. 2 is negative. For secondary current attach to 2 and 3. No. 3 being positive and No. 2 negative; for secondary and primary currents combined attach to No. 1 and No. 3, No. 1 being positive and No. 3 negative.

CARE OF A MEDICAL APPARATUS.

The care of a medical apparatus is a matter that should not be overlooked. If neglected or abused it soon gets out of order and becomes useless. Care should be exercised to keep all the parts of the machine clean, free from dust and corrosion of metals. Neglect of this is liable to result in disappointment when the instrument is wanted for use.

A primary battery, either dry or liquid, of any type or make, is limited in current production. Some are better than others because of superior methods of construction and materials used. The point we wish to impress is, that the life of the best primary cell made is limited to a certain current production which may be drawn from it in one or two days or over a period of a year or more, according to conditions under which it is used.

When the pulsations of the vibrator become weak and occasionally stop while the switch is on, it indicates that the battery is nearly exhausted and should be replaced with a new cell. The best results from using the apparatus are obtained while the batteries are operating the vibrator with a steady, strong pulsation, and as new cells cost only a few cents each, a change should be made promptly when the old one shows weakness.

CHAPTER II.

THE TREATMENT OF DISEASES.—ABSCESS.

ELECTRICITY is used to prevent sup-
puration. Apply the positive electrode
to the diseased part and the negative
either to the hands or feet; this depending
upon the location of the swelling. If above
the shoulders, apply to the hands; placing them
in tepid water with the negative electrode.
If below the shoulders, place the negative at
the feet, using the primary current.

ACNE.

Pimples are very often caused by indiges-
tion or anæmia. Place the negative, at the pit
of the stomach and pass the positive over the
forehead and top of the head. Using the
primary current. This treatment should not
last over three or four minutes at one time.

ATAXIA: LOCOMOTOR: PARALYSIS:

If the trouble is spinal, treatment may be
applied to the spinal cord. Place positive

above negative, using sponge electrodes. In this way currents may be made to adverse the spine in a longitudinal direction. When the effect is to be localized at one particular level the negative electrode should be placed on the front portion of the body and the positive applied to the back at the position opposite. In case of paralysis, if an arm apply the negative to it and hold positive in the other hand. In paralysis of the leg, use positive on the foot plate of opposite foot and apply negative to paralyzed part. In paralysis of the side apply negative to it and move positive slowly over the opposite side. Commence with weak current and increase the strength, as agreeable to the patient. As a rule the secondary current is used, although in some cases benefit is derived from both primary and secondary currents.

If the lower half of the body is paralyzed, apply the negative to the affected part while the positive is held in the hand or placed on the upper part of the spine. A general treatment of the body is often beneficial, in cases of paralysis always following the rule of keeping the positive above the negative. In cases **where** the patient is pale, debilitated, **has a**

feeble pulse, place the positive at the base of the spine and give the body treatment with the negative. If the patient has cold feet and a flow of blood to the head, he should have an occasional treatment of the whole body with the positive while the feet are placed upon the negative.

Whenever children are to be treated with electricity, great care should be taken not to frighten them by sudden shocks or too strong a current, it is also very important to have the contact breaker of the induction coil work very smoothly.

APOPLEXY.

The treatment is as follows: Place the negative at the feet and apply the positive to the spine at the base of the brain for a minute, then give a general treatment by passing it over the whole body, continuing about ten minutes, commence with a light secondary current and increase its strength as you proceed. After this treatment, the positive may be applied to the head for about three minutes, using a fairly strong current. If the head is first moistened the contact will be better. • **Be sure as to the arrangement of your poles; as a**

mistake might prove a serious matter to the patient. If the patient does not improve in from ten to fifteen minutes the treatment may be repeated. The patient should be kept as quiet as possible and have plenty of good fresh air in the room.

ASTHMA.

Where the patient is debilitated, as is usually the case, tonic treatment of the whole body with the secondary current should be given, combined with local treatment. Give local treatment as follows: Apply the negative electrode to the throat and neck and passed down over the chest to the pit of the stomach, while the positive is held on the spine, a little above the negative; using the secondary current. This disease often requires persistent treatment for quite a length of time. If the patient is strong enough treatments should be given every day, if not, give every other day. In most cases the paroxysms are relieved in a short time.

FALLING OF THE ANUS.

Replace the fallen parts, then connect the Rectum Director with the positive pole of the battery, oil it with olive oil or vaseline and

introduce it carefully into the rectum, leave it there and pass the negative electrode up and down the lower part of the spine. Use the primary current.

ANUS,—INDURATION OF

The patient should lie down for one or two hours after treatment. The treatment of induration of the anus is as follows: Take the small sponge, attach it to the positive pole, first moistened, and press it against the parts, while the negative is moved up and down the spine. Use the primary current and continue treatment about ten minutes, repeat four times a week until cured. The treatment may be varied by applying the negative to the feet instead of to the spine every third treatment.

BACK,—WEAK OR LAME

The patient should sit on the positive while the back is sponged over with the negative. Using the secondary current. This treatment should be given for about ten minutes every day.

BOWELS,—LOOSENESS OF

Place the positive at the base of the spine and sponge the back, bowels and stomach with the negative using secondary current.

BRAIN.

Diseases of the brain should always be treated with a great deal of care. In treating any disease about the head always use a very light current and treatment should be of short duration.

BOWELS,—CONSTIPATION OF THE

Connect the rectum electrode to the negative pole of the battery and place it in the anus, at the same time move the positive over the stomach, liver and bowels. Use the secondary current. A small internal dose of cascara sagrada will sometimes prove beneficial, but we do not advise the use of cathartics as a rule, the above treatment is much better without them. Eat good plain digestible food; A dish of oatmeal and milk eaten in the morning will help to keep the bowels open.

BOWELS,—INFLAMMATION OF

The electrical treatment is as follows: Place the negative at the feet and apply the positive to the bowels, moving it across them in all directions: A good way is to place the negative electrode and the feet in warm water and sponge the bowels with the positive. The

tonic treatment of the whole body is also of value. Use secondary current, mild purgatives and injections of warm water and castile soap should be given. Flannel cloths rung out in hot water or alcohol should be laid on the bowels.

BLADDER,—DISEASES OF

The diseases of the bladder for which electricity is chiefly used, are, incontinence of the urine, retention and paralysis. Incontinence of the urine is caused by an inflamed or irritated condition of the neck of the bladder. It may be caused by a cold or hysteria, spinal irritation, or it may depend upon a bad condition of the general health. The symptoms in grown people is to pass water with unusual frequency day or night. In childhood it frequently shows itself by their wetting the bed. In adults, where the trouble is caused by spinal irritation and hysteria, it should be treated as follows: first by sending strong currents through the neck of the bladder, then place the positive electrode at the base of the spine and move the negative over the vicinity of the bladder, use the secondary current; also give general tonic treatment of the spine and of

the whole body. Where the trouble is simply local, give only the local treatment as described above. A much weaker current should be used for children.

BLADDER,—RETENTION OF THE URINE

Retention of the urine, occurring in hysterical persons may be greatly benefited by local treatment. Move the negative over the bladder while the positive is held at the base of the spine. Use secondary currents.

BLADDER,—PARALYSIS OF

Give the same treatment as in retention of the urine, only use secondary and primary current alternately. Treat ten minutes from four to six times a week.

BLADDER,—INFLAMMATION OF

Place the negative electrode at the base of the spine and hold the positive over the bladder, using secondary current. Treatment should not continue over five or ten minutes. Commence with a light current and gradually increase the strength.

BRONCHITIS.

Hold the negative electrode at the base

of the spine and sponge the body up and down over the bronchial tubes and the lower part of the throat. In some cases the tonic treatment will be found beneficial. Another mode of treatment is to connect the tongue electrode to the positive pole, then place it in the mouth while the negative is applied to upper portions of the body but not directly over the bronchial tubes. After treatment cover the body over the bronchial tubes and the upper part of the back with warm flannel.

BRIGHT'S DISEASE.

Electrical treatment is of great value in this disease, especially in its first stages. Use sponge electrodes and place one over each kidney. Use the secondary current. The primary current applied through the kidneys, placing the negative first over one and then over the other; while the positive electrode is at the front part of the body a little above the negative. Then give general treatment with secondary current. The nutrition of the kidneys is said to be improved by this treatment. There are cases on record, where the albuminous casts stopped and the patient restored to complete health by the above treatment.

BED SORES.

In some cases, marked results have followed a single application of electrical treatment. Apply the negative electrode to the ulcer while the positive is held in the hand or placed at the base of the spine. As a rule use the primary current, although in some cases a mild secondary current is better. The electrodes may be applied by wetting a piece of soft linen and laying it over the sore and applying the sponge electrode over it.

BURNS.

Treat burns about the same as the above, only with the positive pole instead of the negative. An application of vaseline, boracic acid salve or lather of carbolic or pure castile soap, makes a good dressing to exclude the air and help the healing process.

CANCER.

The treating of this disease by electricity is often useful in diminishing the pain and in producing sloughing of the parts of the cancer. General treatment of the whole body by sponging all parts of it except the diseased part with the negative, while the positive is either at the base of the spine or in the mouth.

Use secondary current. The tumor should have local treatment by application of the positive to it, placing the negative in such a position that the current flows directly through the tumor. For example, if the cancer is on the breast, place the positive on the tumor and the negative on the back nearly opposite but lower. Treatments should last from ten to fifteen minutes every other day for three or four weeks; After which two or three applications a week will be sufficient. Give an occasional treatment with the primary current. General tonic treatment of the whole body should also be given with the secondary current but do not pass the electrode over the cancer.

CORNS.

Place the foot upon the foot plate, it being attached to the negative pole of the battery and apply the positive pole directly to the corn. Using a small piece of sponge fastened to the ear electrode. Treatment to last about ten minutes daily. Use the primary current.

CHILBLAINS.

Apply positive to the affected parts and negative to some other portion of the foot.

Treatment should last from five to ten minutes each day. Use primary and secondary currents alternately.

CHANGE OF LIFE.

The derangements of the system at this period are so many and varied in their symptoms that it will be impossible to give an extended treatment here. As the nervous system is always more or less affected and in some cases the general health is poor, we should recommend a general tonic treatment three or four times a week with the secondary current. If there is flooding, give the treatment under that head. In cases where there is extreme nervous symptoms, give central galvanization, as given in treatment of diabetes.

CHOLERA INFANTUM.

The treatment is about the same as for cholera morbus, use the primary current. Children cannot stand as strong a current as adults and it is essential that they should be treated with great gentleness, as a sudden or violent shock would startle them and render the treatment much less valuable.

CHOLERA.

The patient should be put to bed and kept warm by being covered with warm flannels and hot water bottles placed at the feet. The electrical treatment is given by placing the positive electrode at the base of the spine and sponging over the bowels, stomach and liver with the negative, using the secondary current. Give the treatment in bed and keep the patient warm, so there will be no possibility of his taking a chill. Where the patient shows debility, give general tonic treatment of the whole body. Other remedies may be given if deemed necessary.

COLDS.

Colds show themselves in various forms; if attended with chills, sore throat and headache, attach the throat electrode to the positive pole of the battery and place it in the patient's mouth, quite far back on the tongue, now close the mouth so as to make contact and apply the negative, using the sponge electrode to the chest and back between the shoulders.

Use a light secondary current. After this treatment, place the positive at the back of the neck and sponge the whole upper part of

the body with the negative, then place the positive at the base of the spine and sponge the lower half of the body in the same manner. Should there be chills but no sore throat or headache, give the tonic treatment only, with the negative electrode while the positive is at the base of the spine. Should a cold come on with fever instead of chills; give a warm foot bath with the negative at the feet and sponge the whole body with the positive, using the secondary current. If the throat is sore, give it local treatment. The patient should keep warm and not be exposed to any draughts. Many diseases arise from taking colds; hence the importance of breaking them up.

CATARRHAL COLD IN THE HEAD.

Place the positive electrode on the nose between the eyes and the negative on the spine between the shoulders, use a light secondary current or, if this is too strong to be agreeable to the patient, use the primary current about half strength. Treatment to last ten minutes. If this treatment is given in time, one or two treatments will break up a catarrhal cold. Treatment may be repeated in eight hours if necessary, As the system is always

a little below the normal in persons suffering from a cold, we advise a general tonic treatment of the whole body, using the secondary current. This latter treatment, we advise, in addition to the local treatment. Should there be any fever, give treatment by sponging the whole body with positive, while negative is at the feet in a warm foot bath.

CARBUNCLES.

Electricity is used to hasten suppuration apply positive to the carbuncle while the negative is held in the hand or placed at the feet, the same as in the treatment of abscess, use primary current. As there is always debility, give general tonic treatment in addition to the local.

CANKER.

This is caused by indigestion. Let the patient live upon a light milk diet for a few days. Wash out the mouth and throat frequently with borax or boracic acid diluted with water. Electrical treatment: Place the positive at the nape of the neck on the spine and apply the negative to the stomach. This treatment to last about ten minutes. Use secondary current. Another treatment is to place

the tongue electrode in the mouth having previously attached it to the positive pole of the battery and apply the negative to the neck and throat. Use primary current. A general tonic treatment two or three times a week will be beneficial.

CRAMPS.

Many persons are troubled with cramps in various parts of the body. Especially if they take a slight cold. The treatment is to apply the negative electrode to the part affected while the positive is placed at some point above it. For example, if the cramps are in the lower limbs, place the positive at the base of the spine and apply the negative to the cramped muscles. For cramp in the stomach, place the positive at the nape of the neck and with sponge attached bathe the stomach. For cramp in the arms, hold the positive at the nape of the neck and apply the negative to the cramped muscles. Use the secondary current.

CRAMP—WRITER'S

This disease may be greatly benefited by electricity. Place the positive at the upper part of the spine and holding the negative in the hands. Rest from all labor, is the best

remedy. If you cannot rest all the time, rest as much as possible.

COLD FEET.

If the patient has hot flushes or a headache, place the feet in warm water with the negative and sponge the whole body with the positive. If the feet are simply cold from poor circulation of the blood, sit the patient upon the positive and rub the limbs and feet thoroughly with the negative. Use secondary current in both cases.

CONTRACTED MUSCLES.

The treatment is to apply the negative to the contracted muscle and the positive to some other part of the body, as the case requires. For example, should the trouble be in the arms, apply the negative to the affected muscle and the positive between the shoulders, or hold it in the hand. If it is the muscles in the leg which are contracted, place the positive at the base of the spine or at the feet. As a rule use the secondary current, although in some cases the primary current is used. Also give tonic treatment.

CATARRH, ACUTE AND CHRONIC.

Place the negative on the spine between the shoulders and apply the positive to the nose between the eyes. Use the primary current and do not use over five minutes treatment.

For chronic catarrh, place the negative on the nose and apply the positive on the back of the neck or upper part of the spine. If the patient is at all debilitated, use the tonic treatment.

CROUP.

This disease is very often relieved quickly by electrical treatment. Place the positive electrode at the throat, use sponge electrode, and the negative at the spine, moving it up and down between the shoulders and the back of the neck for four or five minutes. Now hold the positive on the bridge of the nose, while the negative is on the spine between the shoulders. After this give treatment by seating the patient on the negative and sponging the shoulders and neck with the positive. Use the primary cur-

rent. Be very careful and keep the patient warm all through the treatment.

COUGH,—NERVOUS

Place the positive at the back of the neck and the negative to the throat. Use the primary current. Give ten minute treatments once or twice a day.

CONSUMPTION.

This disease is often benefited by electrical treatments but where there are hemorrhages, do not treat the patient without the aid or advice of a physician. Electrical treatment during this disease will often alleviate the suffering and make the patient more comfortable. Place the positive electrode to the back, while you sponge the lungs in front with the negative, move the two electrodes over the lungs, positive on the back and negative in front; keeping the positive a little above the negative, moving the negative down as low as the diaphragm and the positive as high as the back of the neck. Should you detect a particularly sensitive place in the lungs or bronchial tubes, alternate the current over it by changing electrodes, substituting the positive for the

negative. Use secondary current and a **very** light one as the lungs are extremely sensitive. We also recommend the general or tonic treatment three or four times a week. The patient should have plenty of exercise in the open air, good food and warm clothing. Keep the feet dry. Compound syrup of hypophosphites and cod liver oil are good agents to build up the wasted tissues. Wear warm all wool flannels next to the skin, the year round in cold and temperate climates. Much depends upon hygiene. Daily exercise should be taken in the open air. Horse back or bicycle riding (in moderation) are also highly recommended; the mind should be properly employed and kept cheerful. Diet should include plenty of fresh eggs, milk and rare beef: Brandy, wine or whiskey should be taken only in moderation and only to aid digestion, not as a stimulant. Painting over the region of the lungs with iodine or croton oil will act as a counter irritant and help relieve the pains in the chest. If the patient has diarrhoea, this may be stopped by giving treatment as described under that head. Night air should be generally avoided and an electrical bath taken **three or four times a week.** If any bleeding **from the lungs** occurs, keep the patient **very**

quiet and give salt and water, put cracked ice in the mouth and let it slowly dissolve. The night sweats may be treated by bathing the whole body with diluted alcohol and give a five to ten minute tonic treatment with the secondary current.

CHOLERA MORBUS.

The electrical treatment for this, is to place the positive electrode at the base of the spine and sponge the stomach and bowels with the negative. Use secondary current. Absolute quiet in a horizontal position and keeping the patient warm are essential. Have the room warm and don't treat too long so as to exhaust or expose the patient to the danger of taking cold.

DEAFNESS.

Electrical treatment in deafness has been followed by some wonderful results, especially when dependent upon hysterical or nervous troubles. First place the positive electrode to the back of the head and sponge all about the ear with negative sponge electrode. Give treatments of about five minutes duration, using a very light current. Another way, is to hold the negative electrode on the prominence

in front of the external opening of the ear while the positive is held in the opposite hand; moisten or partly fill the ear with warm salt water, to help conduct the current. Still another treatment is to place the positive electrode to the pit of the stomach and sponge the external surface of and about the ear with the negative. The ear may also be treated by inserting the ear electrode but very light currents must be used and the patient must be watched very carefully for if he should show any signs of fainting, the treatment must cease at once. Use both primary and secondary currents alternately.

DIPHTHERIA.

Give general electric treatment by placing the feet in warm water with negative electrode and sponge the whole body with the positive. Use secondary current. The throat may be treated by placing the positive in the mouth (use throat and mouth electrode) and sponge the neck, throat and shoulders with the negative. Use primary current and do not continue treatment more than five or ten minutes. If the throat is too much swollen to be treated by the throat electrode, treatment may be given

with the sponge electrode on the outside, by applying the same about neck, throat and ears it being attached to the positive pole, while the negative is held in the opposite hand of the patient. Use primary current.

DIARRHEOA.

The positive electrode should be placed at the spine and the stomach, liver and bowels and back sponged with the negative. Use secondary current.

DYSPEPSIA.

This is one of the most aggravating diseases that man is heir to. It is most common among American people. Its symptoms are most numerous and more varied than any other disease known. In all cases we recommend a tonic or general treatment with the primary current. Local treatment should be given as follows: Place the positive at the back of the neck and sponge the region of the stomach, liver and bowels with the negative. Use secondary current. If the patient is troubled with intercostal neuralgia, apply the positive to the stomach, holding the negative on the spine a little above the positive. Use secondary current. Treat every day if patient

does not get fatigued, or every other day if more agreeable. Eat light, wholesome food. Keep the bowels open and take plenty of exercise in the open air.

DROPSY.

This disease may be helped by treatment with both the primary and secondary currents. Place the feet in warm water with the negative electrode and sponge the region of the kidneys with the positive. Use primary current. Also give tonic or general treatment. Avoid all alcoholic liquors.

DIABETES.

Diabetes seems to be a nervous disease, and for that reason we recommend what is called central galvanization. The object is to bring the whole central nervous system under the influence of the primary current. Place the negative pole at the pit of the stomach, and pass the positive over the head and forehead, down the back of the neck and along the whole length of the spine. Use a very light current about the head and increase gradually. Do not apply the current to the head more than one or two minutes at a time. The spine will stand a much stronger current than the head. The back may be treated about five or six

minutes. After this give tonic or general treatment for ten minutes, with the secondary current.

DEBILITY, GENERAL.

Give general or tonic treatment with the secondary current. Should there be any particular weakness of the stomach, back or chest, give local treatment of serum two or three times a week. Use secondary current.

DEATH,—APPARENT

People who have to all appearances been dead, have been restored to life by electricity. The test is as follows: Place the sponge electrode (positive pole) to the back of the neck, and apply the negative to the body over the lungs and heart. A mild secondary current is first used, gradually increasing it until the patient shows signs of life. Keep this treatment up for about five minutes, also apply the negative electrode to the arms, wrists and hands. Now sponge the whole body with the negative while the positive electrode is at the base of the spine. Plenty of fresh air should be let into the room, and the patient's feet and hands should be kept warm with hot water bags.

ECZEMA.

This is a disease of the skin, and in many cases yields very quickly to electrical treatment. Cures are on record when the patient had been given up as incurable. Central galvanization as described in diabetes should be given; also tonic treatment.

ENLARGED GLANDS.

Apply the positive electrode to the swollen glands and close the circuit by placing negative to some near part. Use the primary current. In some cases general treatment with the secondary current will be beneficial.

EAR-ACHE.

Sponge the ear and parts around it, also place the ear electrode in the ear, using the positive while the patient holds the negative in opposite hand. Use a light secondary current and increase its strength gradually.

EAR,—SWELLING OF

Treat as for ear-ache, but if the ear is very much swollen, do not put electrode in the ear.

EPILEPSY.

Give general tonic treatment, also central galvanization, such as is described in the treat-

ment for diabetes. Treatments should be given from two to four times a week.

EYE,—THE

Electricity is used in treating the diseases of the eye with more or less success. A very mild current should be used, as a strong one might do injury both to the eye and brain. General electrization of the eye may be obtained by placing the positive pole over the eye-lid and the negative on the side of the face just above the cheek bone. Another method is to use the eye glass while the positive is held in the corresponding hand.

EYE,—INFLAMMATION OF

In inflammation of the eye, keep the eye clean by bathing with hot water, and bathe with an antiseptic, a 5 per cent. solution of boracic acid. Electrical treatment is: Fill the eye glass (which should be attached to the positive pole) with warm water, then hold the eye down into it, while the negative is held in the corresponding hand. Change the water two or three times during the treatment. **Treat from ten to twenty minutes, using a very mild current.**

EYELID,—GRANULATED

Use the primary current and treat the same as for inflammation of the eye. Also give general tonic treatment with secondary current.

SPASM OF THE EYELID.

Apply the positive pole to the eye either through the eye glass or by the sponge electrode through the closed eye-lid, while the negative is at the back of the neck or held in the corresponding hand of the patient. Use mild secondary current, treatment to last about ten minutes. Some cases show early improvement, by the same treatment with the primary current. In some cases where there is general debility, a general tonic treatment of the whole body with the secondary current will greatly benefit.

ULCERATION OF THE EYE.

Give the same treatment as in granulated eyelid.

PTOSIS.

This affection consists of paralysis of the elevator of the upper lid, it should be treated the same as spasm of the eyelid, only with a stronger current.

CATARACT.

There is difference of opinion as to the cure of this disease by electricity. The treatment is, positive at the eye and negative in the corresponding hand or at the base of the spine. The treatment is long and tedious at best. Use primary current. General treatment, tonic with secondary current should also be given. The current may be applied to the eye either with the eye glass or with the sponge electrode through the closed eyelid. In most cases it is advisable to have the advice of an oculist or electrician.

PARALYSIS OF THE UPPER EYE-LID.

See treatment for ptosis.

OBSTRUCTION OF THE LACHRYMAL DUCT.

Treatment should last about five or ten minutes. Apply positive electrode to the disease and place negative at the back of the neck or in corresponding hand. Treat every other day.

OPACITY OR FILM OF THE EYE.

This is an affection of the vitreous humor. Treatment: Apply positive electrode to the closed eyelid and the negative to the

hollow just above the opening of the ear. Use primary current. A treatment with the secondary current is also advisable; negative electrode at the eye and positive at the base of the spine.

FELON.

In order to effect a cure, treatment should be given in the very first stages of this disease, although the pain may be relieved at any stage by electrical treatment. Place the affected finger in warm water with positive electrode and hold the negative electrode in the opposite hand. Use primary current. Give treatment of from five to ten minutes, four or five times a day.

FLATULENCE

This is a symptom of dyspepsia or indigestion and yields very readily to electrical treatment. Apply the negative pole at the pit of the stomach and over the bowels, and the positive to the spine, keeping it a little above the negative. Use secondary current. If depending on acute indigestion, insert the negative electrode into the rectum and apply to the spine or abdomen,

FEVER.

Electrical treatment is often beneficial. Typhoid fever can sometimes be thrown off by giving the patient a general tonic treatment with the secondary current. When attended with hot flushes or in sudden attacks, place the feet in warm water with the negative electrode, and sponge the whole body with the positive, using the secondary current. When threatened with fever, the patient should go to bed and get absolute rest for a few days, also pay special attention to the diet, eating very lightly of plain toast, milk and tea. All meat and hearty vegetables should be avoided. The bowels should be kept open by giving a treatment once a day by placing the tongue electrode in the mouth, attached to the positive pole and sponge the bowels with the negative for about five minutes, then place the negative at the base of the spine and sponge the bowels with the positive. Use secondary current. Care should be taken when convalescent not to let the patient take cold or eat too hearty food. Ice held in the mouth and allowed to melt will help quench the thirst and reduce the fever.

SCARLET FEVER.

If the eruption does not come to the surface properly, give general treatment of the whole body with the negative electrode. The upper part of the body is sponged with the negative while the positive is held in the mouth or at the back of the neck. Then place the positive at the base of the spine and sponge the lower portion of the body with the negative, use the primary current. After this treatment place the feet in warm water with the negative electrode and sponge the whole body with the positive. As there is most always sore throat with this disease it should receive local treatment. Hold the negative electrode in the opposite hand to the side under treatment and sponge the neck, throat and ears with the positive. Then change and treat the opposite side. Keep the patient warm and have good ventilation. The room may be kept comparatively sweet by burning coffee on hot coals and using plenty of carbolic acid. Should dropsy occur give local treatment to the kidneys.

FEVER AND AGUE.

The negative electrode should be applied over the liver, while the positive is held on

the spine a little above. Also general tonic treatment should be given. Use a strong secondary current and treat ten minutes daily. The best time for treatment is just before a chill comes on.

INTERMITTANT FEVER.

Treat the same as for fever and ague.

GOUT, RHEUMATIC.

Give general tonic treatment with secondary current, also general galvanization as given in treatment for diabetes, and treat the affected part by sponging it well with the positive electrode. Place the hands or feet in warm water with the negative electrode and then treat with the positive; using primary and secondary currents alternately. Eat light, wholesome food. In some cases a rigid milk diet is to be recommended. Wear warm clothing and abstain from all alcoholic liquors.

GOITRES.

These tumors may be reduced and very often cured by electrical treatment with strong currents. The rapidity of the reduction or cure depends upon the nature of the tumor. **Small and soft ones disappear entirely and**

permanently: Large ones that are not too hard will also disappear. Those that are both very large and hard are diminished to a certain extent, but may not entirely disappear. The treatment is to apply the positive electrode to the tumor while the negative is at the back of the neck or at the base of the spine. Use primary currents. Treat about ten minutes, every other day. Also give general tonic treatment with secondary current, twice a week. Goitres often cause a sense of heaviness or choking, which electrical treatment entirely relieves, even before any reduction of the tumor is noticeable.

HEADACHE.

The treatment of headache depends upon the cause. If caused by disordered stomach or bowels, what is called a sick headache, place the positive electrode at the base of the brain and apply the negative over the stomach, liver and bowels, using a mild secondary current. General tonic treatment of the whole body, with secondary current will cure or help some patients, while central galvanization (as described in treatment of diabetes) will help others.

HYSTERIA.

Avoid giving the patient shocks; strong currents are not objectionable. Give the patient general treatment with secondary current. In most cases the sedative influence of this tonic treatment will be sufficient. If not, central galvanization (as described in the treatment of diabetes) may be tried. Local treatments are sometimes necessary, but should be left to an experienced electrician. Be careful and do not give the patient any sudden shocks.

HERNIA.

Treat this by applying the positive electrode over the hernia and negative in the rectum or at the back opposite the disease. Use mild secondary current.

HICCOUGH.

Hiccoughs may sometimes be stopped by applying the positive pole at the back of the neck and the negative at the pit of the stomach, using secondary current.

HAY FEVER.

Treat this by placing the positive electrode, with sponge attached, to the base of the

nose, between the eyes, and negative at the back between the shoulders. In some cases general tonic treatment with the secondary current is quite effective.

HIP JOINT DISEASE.

This disease may be treated electrically in addition to mechanical treatment. Apply positive electrode at the diseased hip and negative at the corresponding foot, giving ten minutes treatment. Using primary and secondary currents alternately. This treatment should be given daily and the general tonic treatment every other day.

INDIGESTION.

Place the positive at the back of the neck and sponge the region of the stomach and bowels with the negative. Another method is to place the positive electrode on the tongue and the negative at the pit of the stomach. Use secondary current. If the patient is debilitated give general tonic treatment of the whole body.

INSOMNIA.

For this trouble, when caused by no special disease, we advise the use of general

tonic treatment, either with the primary or secondary current. Very often sleep will be induced in ten minutes after treatment.

JAUNDICE.

Place the positive electrode on the tongue or back of the neck, and apply the negative over the stomach, liver and bowels; after this give another treatment by seating the patient on the negative electrode and sponging the body with the positive. Use a light secondary current. Special attention should be given to pure air, proper temperature and cleanliness. This disease is most frequent in very young children.

INFLAMMATION OF THE KIDNEYS.

In many cases a general tonic treatment of the whole body with the secondary current will give relief. Local treatment may also be given by placing the negative electrode at the feet and applying positive to the back, in the region of the kidneys.

INFLAMMATION OF THE LIVER.

Place the positive electrode over the liver while the negative is at the base of the spine, or on the back opposite the positive, using

the secondary current. Also give general tonic treatment of the whole body with the secondary current.

WEAK LUNGS.

Give general tonic treatment of the whole body. Local treatment may be given by passing the negative electrode over the chest while the positive is applied to the back a little above the negative, using a light secondary current. The treatment is about the same as that given for consumption. Do not pass the current through the heart or place the positive on the spine while treating the chest.

WEAK ANKLES.

Treat by placing the positive electrode at the base of the spine and passing the negative over the lower limbs, ankles and feet. Use the secondary current.

LOSS OF SMELL.

This may be caused by catarrh, a severe cold, mechanical injury or by some organic trouble. Many cases are cured by electrical treatment, which is as follows: Apply the negative electrode to the nose between the eyes, and the positive to the back of the neck. Use a mild secondary current.

INFLAMMATION OF THE LUNGS.

Give about the same treatment as in consumption and keep the patient warm in bed. Sometimes general tonic treatment alone will greatly benefit the patient.

LOSS OF VOICE.

The local treatment for this is to apply the negative electrode over the larynx and the positive at the base of the brain. Give the general tonic treatment to the whole body. This treatment will be of great benefit if the patient is weak or debilitated and will oftentimes entirely restore the voice. Use the secondary current, giving from five to ten minute treatments.

MELANCHOLIA.

Give general tonic treatment to the whole body with secondary current. Also central

galvanization as described in treatment of diabetes. This is often an obstinate trouble to cure, but perseverance will sometimes bring about wonderful results.

MEASLES.

In order to bring the eruption to the surface of the skin, place the positive electrode in the mouth and sponge the body as far down as the waist with the negative, then place the positive at the base of the spine and sponge the lower portion of the body with the negative, after this, place the negative electrode at the feet and sponge the whole body with the positive. Use the primary current in both treatments. Keep the room warm, well ventilated and darkened; as the light is liable to injure the eyesight.

MENSTRUATION (SUPPRESSED).

This trouble may often be relieved by electrical treatment: First place the positive electrode at the back and sponge the abdomen with the negative. If this does not give relief, place the feet in very warm water with the negative electrode and sponge the lower back and bowels with the positive. Keep the patient very warm. Use a strong secondary

current. In obstinate cases or where immediate relief is required the instrument may be connected to the negative pole and introduced into the vagina and the back and bowels sponged with the positive, using a strong secondary current.

MENSTRUATION (PAINFUL).

Treat as in suppressed menstruation, in both cases it is a good plan to give the treatment of a hot foot bath with the negative electrode and pass the positive over the lower parts of the body.

MENSTRUATION (RETARDED).

If the patient is weak and debilitated, give general tonic treatment of the whole body with secondary current. If the patient appears full blooded with a tendency of the blood to rush to the head and headache, give same treatment as in suppressed menstruation.

MENSTRUATION TOO COPIOUS, FLOODING, MENORRHAGIA.

In some cases general tonic treatment of the whole body will prove an effective measure of relief, other cases need local treatment; if so put the patient to bed and introduce the

womb electrode which has previously been attached to the positive pole of the battery, while the negative is applied to the back and to the abdomen over the womb. Use secondary current, commencing with a very light one and increasing the strength gradually.

MISCARRIAGE.

Give same treatment as in flooding.

SORE NIPPLES.

Apply the positive electrode to the nipples and have patient hold the negative in corresponding hand: either the primary or secondary current may be used, but the primary is considered best by some authorities. A good way is to fill the eye glass with warm water, and apply by holding the nipples into it.

NEURALGIA.

If properly treated, neuralgia is one of the diseases that yields most readily to electrization. There is one difficulty in the treatment of neuralgia by electricity and that is the intensity of the pain. Often the first few treatments aggravate the pain, especially if the **current is too strong** or the treatment is **con-**

tinued too long. Not over one treatment a day should be given. Give general tonic treatment of the whole body every other day. For local treatment, where there is no swelling, apply the negative to the painful parts, and the positive at the hands or feet. If there is swelling apply the positive to the disease, and the negative at the hands or feet, using a secondary current.

NOSE,—HEMMORRHAGE OF

Bathe the nose with cold salt water, at the same time snuffing up some of the water. The electrical treatment is, place the negative electrode at the back of the neck and apply the positive to the nose between the eyes: Using a mild secondary current.

OBESITY.

Treatment is to avoid all starchy or fatty foods. Take long walks of five or ten miles per day. Use no alcoholic liquors. The electrical treatment is to apply strong secondary currents through the abdomen.

INFLAMMATION OF THE OVARIES.

The feet of the patient should be placed in warm water with the negative electrode,

using the foot plate, while the positive is applied to the body over the inflamed ovary.

OVARIAN TUMOR.

The treatment consists of sending currents from the primary directly through the tumor by holding the positive electrode over the tumor and the negative at the back opposite. The negative may also be placed at the feet and the positive passed over the tumor, bowels and back.

OBSTRUCTIONS.

Where there is no inflammation or induration, apply the positive to the affected part and the negative opposite, using the secondary current. But if there is swelling or induration present, apply the positive to the affected part and the negative opposite. Use primary current.

OZOENA.

The positive electrode should be applied over the disease and the negative at some point opposite or below. If this does not relieve the difficulty in from one to two weeks reverse the poles, holding the negative over the disease and using the primary current

This local treatment should be given five or six times a week, combined with general tonic treatment of the whole body.

PREGNANCY.

Electricity is used to tone and strengthen the system and is especially beneficial in the early stages. It will be found to relieve many of the discomforting symptoms which many women are inflicted with during this period. A mild even secondary current should be used. Never give sudden shocks, or apply the negative to the base of the spine or abdomen, Put the positive at the base of the spine by letting the patient sit upon it and apply the negative to the stomach, bowels and back. A general tonic treatment with the negative given once or twice a week will be found advantageous. The above treatment is said to be a preventative to miscarriage.

PARALYSIS.

Electricity has been used in this disease with more or less success since the earliest history of electric therapeutics. The disease arises from various causes, such as blood poisoning, rheumatism, hysteria, mineral poi-

soning, etc., some distinct or morbid condition of the brain, or spinal cord and external injury. The treatment varies, according to the cause. A description of treatment in a general way will here be given: For local treatment the negative electrode is applied to the affected part and the circuit closed with the positive, using secondary current. For further treatment (see Ataxia, locomotor,) and give the general tonic treatment daily to the whole body.

PARALYSIS OF THE BLADDER.

This trouble arises from some incurable disease of the spine and in such a case cannot be cured. The electrical treatment is to apply the negative electrode over the bladder and the positive on the back or at the back of the neck, using a strong secondary current. This treatment should be continued faithfully for a long time, an improvement will be the result, but a complete cure is very seldom effected. Central galvanization as prescribed for diabetes, should also be given.

PLEURISY, OR INFLAMMATION OF THE PLEURA.

This is often known as "a stitch in the side." It may be in one or both sides. Con-

sists of an effusion of water between the lungs and the walls of the chest and is the result of exposure to cold, an injury, wound, cancer or consumption. It is preceded by a chill, a sharp cutting pain in the side which prevents full respiration. For treatment: Apply the positive electrode to the side where the pain lies and the negative to the base of the spine; use secondary current. If there is fullness of blood in the head, apply the negative to the pain in side and hold the positive in the mouth.

PILES (HEMORRHOIDS).

Electricity is used in the cure of hemorrhoids with marked success. Treat as follows: Place a small sponge electrode at the anus, having previously connected it with the positive pole of the battery and hold the negative at the lower part of the spine. If the anus is not much swollen the rectum electrode may be inserted instead of using the sponge at the opening. To insert the anus electrode, oil it with sweet oil or vasoline and gently pass it up into place.

POLYPUS.

Polypus may be treated electrically by applying the positive electrode to the external

parts directly over the tumor and the negative to be placed at the back of the neck, if the polypus is in the nose, and at the back opposite if in the womb.

RHEUMATISM,—INFLAMMATORY AND ACUTE

Either of the above kinds of rheumatism may be treated with the positive electrode. If the trouble is about the head, neck, arms or shoulders, hold the negative in the hands and apply the positive to the painful parts. If the pain is below the arms, apply the negative electrode to the feet and the positive to the affected parts. Drink freely of lemonade, avoid alcoholic liquors, meats and fatty food. A rigid diet for a few days is to be recommended.

RHEUMATISM,—CHRONIC

Chronic rheumatism is much more obstinate and resists a cure more than the acute kind. Very often the general tonic treatment will give relief. For local treatment, treat with the negative electrode instead of the positive as in the acute form. Also use the primary and secondary currents alternately. If the joints are enlarged treat with the posi

tive electrode, using the primary current. Keep the body warm and the feet warm and dry. Do not allow the patient to expose himself to any dampness. The electric bath is to be recommended.

RICKETS.

Children afflicted with rickets quickly improve under electrical treatment. General tonic treatment of the whole body with the secondary should be given, also central galvanization as described in treatment of diabetes. The electric bath is also of value.

RINGWORM.

Common ring worm is treated with the primary current, using the positive electrode and closing with the negative to the lower part of the body.

SCROFULA (KING'S EVIL).

Treat by placing the positive electrode at the back of the neck and apply the negative to the upper part of the body, but not to the head. After which, place the positive to the lower part of the spine and treat the lower part of the body with the negative. An oc

casional treatment with the positive should be given with the negative at the feet, using secondary current. The general tonic treatment should be given and if the patient has any tumors or swollen glands, they should be treated as directed under those heads. Central galvanization as prescribed for diabetes should also be given. Special attention should be paid to hygiene cleanliness, ventilation, etc. **Do not live in a low damp locality.**

SUNSTROKE.

In most cases of sunstroke, electricity is a valuable agent in restoring persons who have been overcome with the heat. General tonic treatment should be given, also central galvanization as described in the treatment of diabetes. Local treatment to the head may be given but a very light secondary current should be used, positive electrode at the head and negative at the base of spine. In all cases have the attention of a good physician.

SPINAL IRRITATION.

Give general treatment of the spine with negative electrode, holding the positive at the

pit of the stomach. Use the secondary current. Treat from five to ten minutes; also give central galvanization as described in treatment for diabetes. In most cases the whole nervous system is affected and for this we advise general tonic treatment, two or three times a week.

SCIATICA.

This painful disease sometimes yields very readily to electrical treatment and most cases can be cured or benefited by it. Both primary and secondary currents may be used alternately. The positive electrode is placed on the abdomen and the negative passed over the back and thigh along the course of the sciatic nerve; the same treatment may be given with the positive at the base of the spine; each application should last from five to ten minutes. In connection with the above give general tonic treatment once or twice a week. The patient should wear all-wool underclothing in cold and temperate climates. Alcoholic liquors and all stimulating foods should be avoided. Counter irritation by means of the wire brush will also be found beneficial.

SPLEEN—ENLARGEMENT OF, INFLAMMATION OF

Treat with the positive electrode while the negative is at the back opposite, using the primary current for enlargement and the secondary for inflammation.

SPINE—INFLAMMATION OF

Treat by placing the negative electrode at the feet and apply the positive with sponge electrode to the spine, using primary and secondary currents alternately.

SPINE,—CURVATURE OF

Curvature of the spine, depending upon weakening and relaxation of the muscles and ligaments, combined with general debility, may be treated with more or less success by electricity.

General tonic treatment of the whole body with the primary and secondary currents often gives wonderful results. Local treatment may also be given by placing the negative on the contracted muscles and the positive on the relaxed or expanded ones; the circuit may be closed with the other pole by placing it in the

hands, at the base of the spine, or at the back of the neck. If the curvature is at the upper part of the spine, the best polarity is at the back of the neck. The contracted muscles should be treated first, then reverse the poles and treat the relaxed ones. An occasional treatment through the hands is recommended. If the curvature is at the lower part of the spine, take the polarity from the base of it, also sponge the chest occasionally with the negative while the positive is held on the relaxed muscles but never when on the spine.

STAMMERING.

Electrical treatment has been found very valuable in the cure of stammering. Dr. Althurs cured a case of five years standing, a boy nine years of age. The primary current was used; treatments were given twice a week for two months by applying the positive to the larynx (the throat over the windpipe) and the negative to the back of the neck. Both primary and secondary currents may be used alternately.

STOMACH,—INFLAMMATION OF

Treat by applying the positive over the

stomach and the negative on the back opposite, using the secondary current.

SHAKING PALSY.

Give the general tonic treatment of the whole body with the secondary current, also central galvanization as described in treatment of diabetes.

ST. VITUS DANCE.

Give general tonic treatment of the whole body, using secondary current. A nutritious diet, sea bathing and regulated exercise in the open air. Local treatment may be given under the advice of a good physician.

TALIPES (CLUB FOOT).

Electric treatment in addition to mechanical appliances will be found advantageous in this trouble. The secondary current should be used. Apply the negative electrode to the partially paralyzed muscles, while the positive is at the base of the spine.

TETANUS (LOCKJAW).

Apply the negative electrode to the contracted muscles and the positive to the back

of the neck or in the hand, using the secondary current.

TOOTHACHE.

Apply the positive electrode to the affected tooth, while the negative is held in the hand using secondary current.

TOOTH,—ULCERATED

Treat the same as for toothache, only using the primary current instead of the secondary. It is claimed that two or three treatments of from ten to twenty minutes will break the tendency to ulceration, if given in time.

URINE,—RETENTION OF

Place the positive electrode on the back, and treat the body over the bladder with the negative, using the secondary current. Should there be difficulty in retaining the urine, place the positive at the base of the spine and treat with the negative, using the secondary current.

UTERUS,—PROLAPSUS OF (FALLING OF THE WOMB).

Give general tonic treatment three or four times a week. Local treatment should

also be given. It consists of applying the positive to the mouth of the womb, while the negative is passed up and down the back, as far up as the shoulders and also over the upper part of the abdomen. In cases of long standing the treatment sometimes seems to aggravate the symptoms at first, but this need not alarm the patient, as it is of no consequence and sometimes happens when the most favorable results are being brought about. After each treatment have the patient lie down for an hour or so. Good fresh air, sunlight and wholesome food will facilitate a cure. In fact, everything should be done to tone up and strengthen the system. The clothing should be light and hang from the shoulders, and not on the weakened muscles of the abdomen and around the womb.

UTERUS,—ULCERATION OF

Apply the positive electrode to the mouth of the womb, as in prolapsus, and pass the negative over the abdomen and the lower part of the back. Length of treatment to be from five not to ten minutes, according to the strength of the patient. After this, seat the patient on

the negative electrode and apply the positive to the abdomen. Use primary current; also give general tonic treatment of the whole body two or three times a week with the secondary current. Cleanliness should be closely observed. A douche of 5⁰/₀ boracic acid and warm water is one of the best antiseptics for this purpose.

UTERUS,—ENLARGEMENT AND INDURATION OF

These troubles are treated the same as ulceration. The rapidity of a cure, in any of the diseases of the womb, depend upon the nature of the case. If it is of long standing and has become chronic, it will take a much longer time than if of an acute nature.

UTERUS,—INFLAMMATION OF

Apply the positive electrode to the abdomen over the womb, while the negative is placed at the feet. Should there be fever, place the negative at the feet and apply the positive over the whole body. Use the secondary current. The electric bath will be found of value.

VOMITING.

For cases of vomiting which are caused by some nervous disturbance, electrical treat-

ment is of great benefit. General tonic treatment should be given and also local treatment by placing the positive at the back of the neck and the negative over the stomach. Both primary and a strong secondary current should be tried alternately. Treatment should last from ten to twelve minutes.

WRY NECK.

Apply the positive electrode to the contracted muscles and the negative to the opposite side of the neck, using primary current; then reverse and apply the negative to the contracted muscles and the positive to the other side, using secondary current.

WHITLOWS,—FELONS

Apply the positive electrode to the diseased joint of the fingers, in a dish of warm water and the negative is to be held in the opposite hand.

WHITE SWELLING.

Apply the positive electrode to the disease and the negative to the corresponding foot, using primary current, also give general tonic treatment of the whole body with **secondary current.**

WORMS.

Give general tonic treatment with secondary current and local treatment with the positive electrode on the spine, while the negative is passed over the stomach and bowels.

WOUNDS,—INFLAMED

Apply the positive to the wound and the negative to the same part but below it. Use secondary current. A piece of fine linen moistened with warm water should be placed over the wound and the electrode applied over it.

WEAK STOMACH.

This may be treated by giving general tonic treatment of the whole body with the secondary current, also by local treatment with the positive applied to the weakened part and the negative at the base of the spine. Use secondary current.

WATER BRASH.

Apply the negative electrode to the pit of the stomach while the positive is passed up and down the whole length of the spine, using

the secondary current. If the patient is debilitated, give general tonic treatment to the whole body with secondary current.

ENLARGEMENT OF THE LIVER.

This is a disease mostly prevalent in hot countries. The electrical treatment is the same as in inflammation of the liver, only using primary current instead of secondary.

SLUGGISH LIVER.

Apply the positive electrode to the base of the brain and the negative to the surface of the body over the liver, using secondary current.

LEUCORRHEA (WHITES).

The remedies for this trouble depend upon the cause. In some cases electricity is used with success. Give the general tonic treatment daily with the secondary current. The whole body should be treated, but give particular attention to the parts over the hips, bowels and over the lower bowels. Warm water injections and the advice of a good physician are recommended.

THE ELECTRIC BATH.

The electric bath provides a most agreeable and convenient way of applying general electrification to the whole body and its tonic and stimulating effects are sometimes wonderful. It is used principally in the treatment of morbid conditions of the body, such as debility, anæmia, rheumatism, gout, sciatica, rickets, etc. Also in general neuritis after fevers, la grippe, diphtheria and many other diseases. The bath-tub should be of porcelain or wood, the former being the best and is the easiest kept clean. It should be about five and a half feet long.

The water in the bath should be kept at a temperature of 90 F. but may be varied one or two degrees to suit the comfort of the patient. The bath should contain water enough so that when the patient lies in it, the whole body,

limbs and shoulders will be covered. A thermometer should always be in use to ascertain and regulate the temperature of the water. The apparatus required is as follows: Two electrodes in the form of flat metal plates, one for the head and one for the foot of the bath. copper is the best metal as it will not corrode. Zinc plates may be used. These plates should be kept bright and clean. The metal plates should be provided with thumb screws or binding posts so as to connect the wires from the battery. The head electrode is usually larger than the one used at the foot. The size of the plate varies from six by twelve inches to twelve by eighteen inches. A small plate is sometimes used for the hips and knees when it is desired to direct the current especially to those parts. Always have water enough to cover the plates. The feet may be allowed to touch the foot plate. The shoulders and back of the patient should be protected from the head plate. This may be done by a back rest, made with a wooden frame, having pieces of canvas or

rope cloth stretched across it. If the patient prefers not to have the feet in actual contact with the foot plate, they need not be, but must be in close proximity to it. As the water is a conductor, the body does not receive the whole current but **only** a portion of it. The more water, the more current is lost to the patient; hence the importance of having just enough to cover the patient's body and shoulders and the electrodes. If salt or acid is added to the water, it becomes a better conductor of electricity and therefore the patient does **not** receive as much current as if the water were **pure**. We therefore do not recommend anything but pure warm water for the electric bath. The duration of the bath should be from ten to fifteen minutes. About a dozen baths should be given. The first six, six successive days, and the last six, every other day. A patient may have more than twelve baths, if he so desires, but this number is generally enough. Should the patient feel any faintness during **the process of the bath**, the current must be

reduced. The first sensation felt by the patient is usually a prickling sensation at the ankles or knees. A metallic taste may be perceived as the bath progresses and the current grows stronger. If the patient feels a throbbing or fullness of the head during the bath, a cold wet towel should be placed on top of the head. Do not give a bath soon after a full meal. After the bath and dressing the patient should rest for fifteen or thirty minutes. The patient can wear an ordinary bathing costume if he wishes. A patient entering the bath should be allowed a few minutes to recover from the reaction produced by the warm water before the electricity is applied. When about to terminate the bath, the current should be reduced gradually, not shut off suddenly. The direction of the current should generally be from the head to the feet; the positive electrode being at the head of the bath and the negative at the feet; although in some cases the current will alternate. Patients having pimples or acne upon the back are most al-

ways cured by these electric baths. Should the patient feel any exhaustion after the bath, lighter currents must be used. Use secondary current. After the bath, give the patient a good brisk rubbing with a coarse towel or flesh brush, and do not allow him to take any violent exercise for several hours.



CONCLUSION.

In conclusion we will say that there are many diseases in which electrical treatment will effect a cure without the use of drugs, which have a tendency to injure the system. Every home should have a family battery. It will save its price many times over and in some instances save a life. A very little practice will enable any person to operate our battery successfully.

In giving treatment, avoid giving sudden shocks. They are never of service in treating disease, and where the patient is of a nervous temperament, they are likely to do harm. Our advice is to take plenty out-of-door exercise where it is possible to do so. Stay in bed at least eight hours out of the twenty-four; have your houses well ventilated.

A TALK ON VIBRATION

To preserve beauty and health or to develop them, or for the rational treatment and speedy cure of most of the ill that flesh is heir to, stimulation of the circulation of the blood is today generally recognized as the most natural, effective, and pleasant method.

Electrical vibratory stimulation is the perfection of treatment for the circulation.

For centuries, the benefits of gentle stimulative action on the blood vessels, glands, nerves, and muscles have been recognized, but it has been only within the last few years that the invention of the portable electrical vibrator, reaching its perfection in the Premier Vibrator, has rendered this treatment simple, inexpensive, and within reach of everyone.

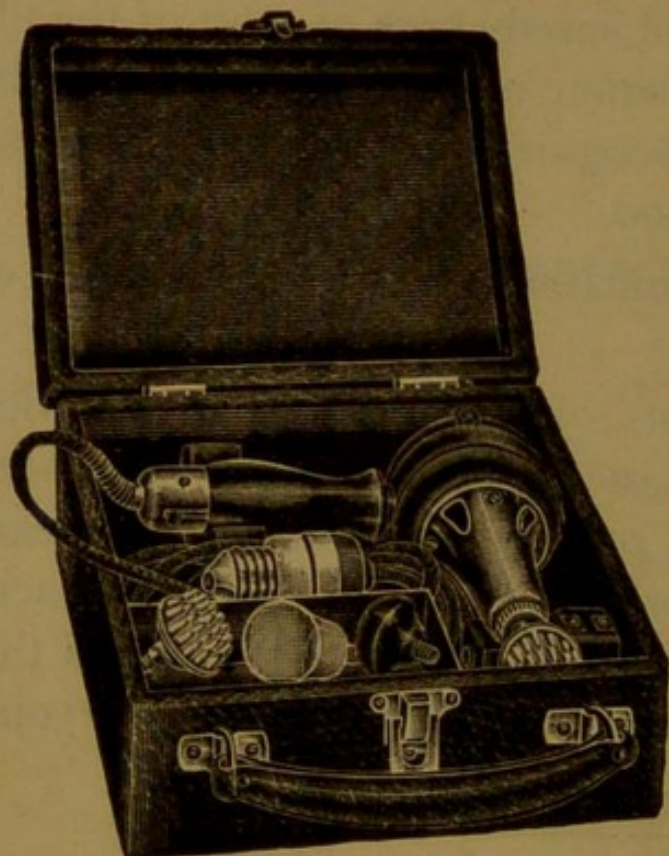
Effect of Vibration on the System

Physicians are unanimous in their approval of electric vibratory stimulation and are applying it to treat a steadily widening range of ailments.

Almost all the defects in physical well-being are caused by poor circulation of the blood. When too many impurities are to be carried away by the blood, it becomes unable to maintain its normal course and swellings, congestions, poisonous matter, and finally pain, result. VIBRATOR STIMULATION RELIEVES THIS CONGESTION AND RESTORES NORMAL CONDITIONS.

The use of the Premier Vibrator will preserve health, aid in the cure of most diseases, preserve or restore beauty of contour and complexion, attune a shattered nervous system, or develop weak parts of the body to natural proportions.

PREMIER ELECTRIC MASSAGE VIBRATOR



**For Direct or
Alternating
Current Circuits**

This illustrates the Premier Electric Vibrator ready to be connected to the electric light current, which is accomplished by screwing the attachment plug which is on the end of the cord into the most convenient socket.

It can be used on direct currents from 100 to 120 volts; and on alternating currents of 60 cycles, 100 to 120 volts. Not adapted for alternating currents of frequencies higher than 60 cycles. A special resistance attachment is furnished for use on 220 volt circuits for which an extra charge is made.

The Premier is light, simple, and efficient in operation. It is furnished complete with five styles of applicators in a handsome Leatherette case.

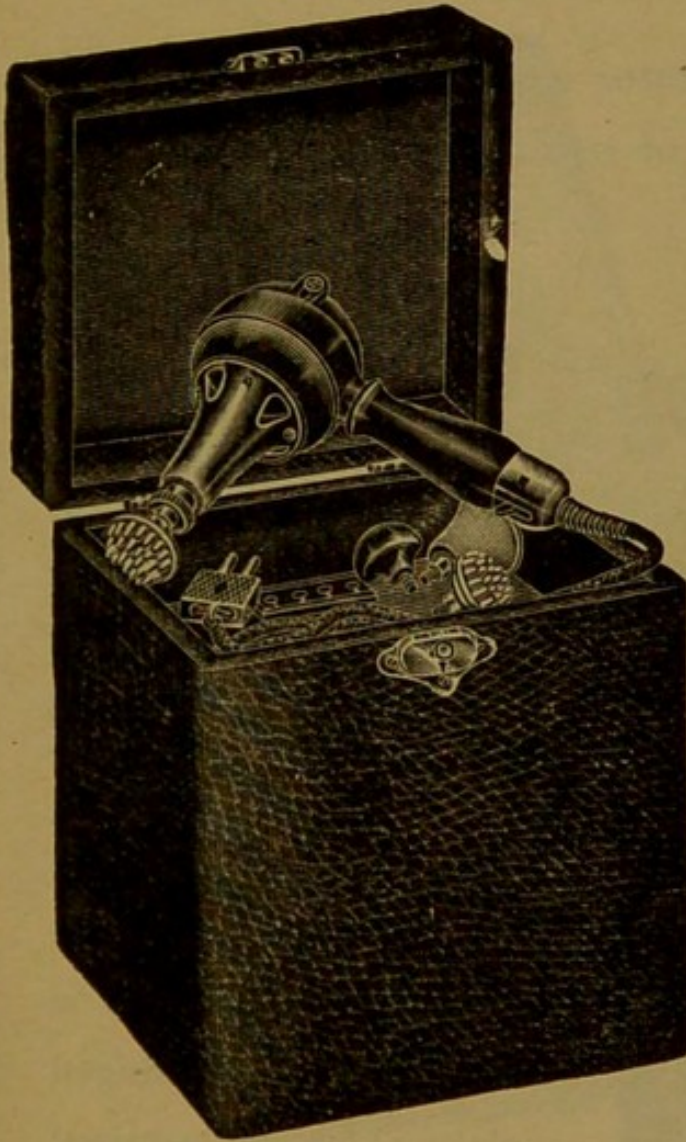
The construction is of the highest quality. The vibrations are from a very high speed motor, running smooth and adjusted to give the best possible results. There are none of the rotating parts exposed to catch the clothes or hair—a dangerous feature found in some other types of vibrators.

List No.	Price
2236 Premier Electric Massage Vibrator.....	\$25.00

For Battery Type Vibrator, see next page.

PREMIER ELECTRIC MASSAGE VIBRATOR

Battery Type



This illustrates the Premier Electric Vibrator designed the same as No. 2236, described on preceding page, but arranged for batteries instead of electric light current.

The case is plush lined and covered with a heavy leatherette covering, and is fitted with a strong leather handle and heavy nickel-plated trimmings. It measures $9\frac{1}{4} \times 8 \times 12$ in. high and contains six dry cells which are connected to a socket plate having four holes, which are so arranged that four, five or six cells can be connected in circuit as desired.

One set of dry batteries for ordinary use will last a long time.

New batteries can be obtained in any locality, as they are standard size as used for automobile ignition and should cost not to exceed 25 cents each.

One advantage of this style is that the vibrator can be used anywhere regardless of whether an electric current is available or not.

A full equipment of five applicators is furnished with this outfit.

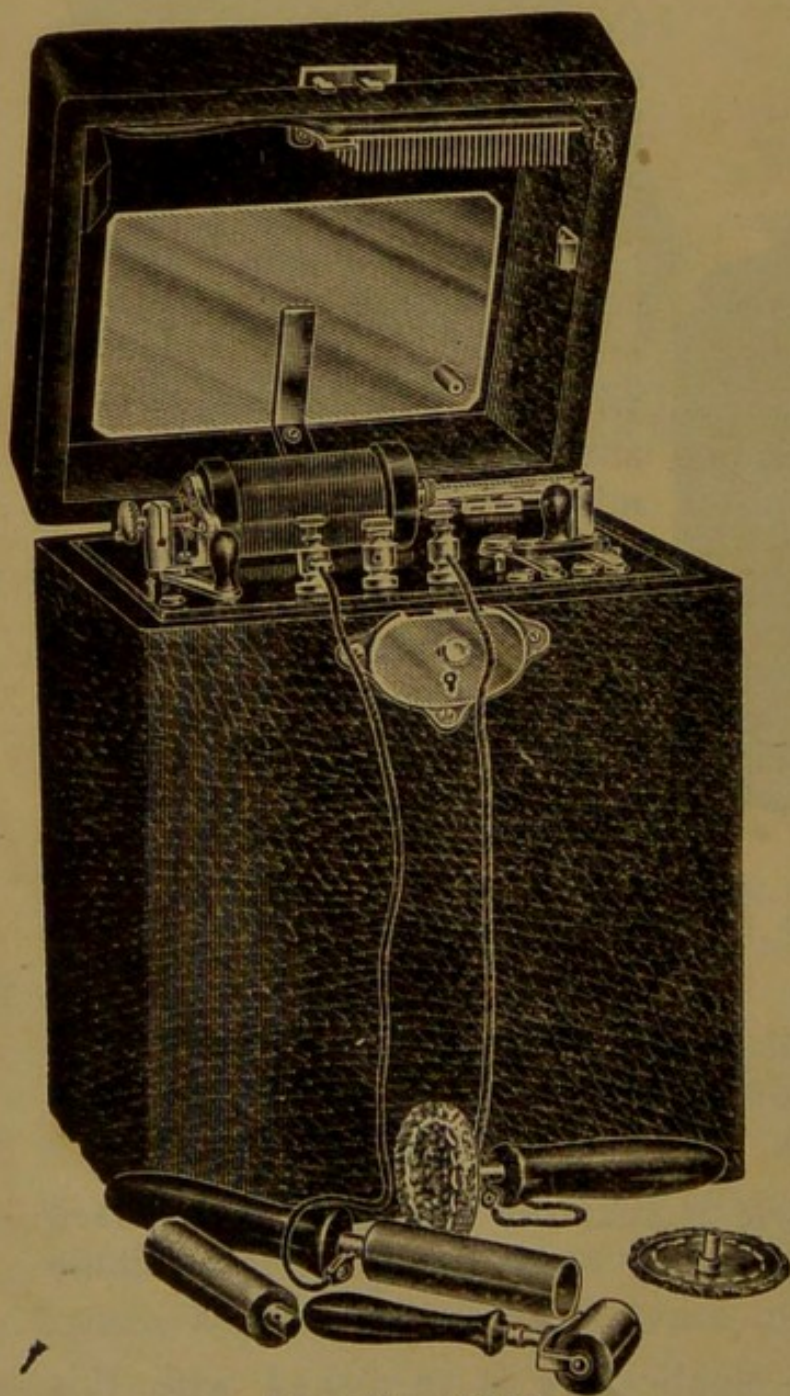
List No.	Price
2237 Premier Electric Massage Vibrator, Battery type..	\$25.00

COMBINED ELECTRIC MASSAGE VIBRATOR AND ELECTRO- MEDICAL APPARATUS.

This Combined Massage Vibrator and Medical Apparatus is highly efficient for either method of treatment separately or both

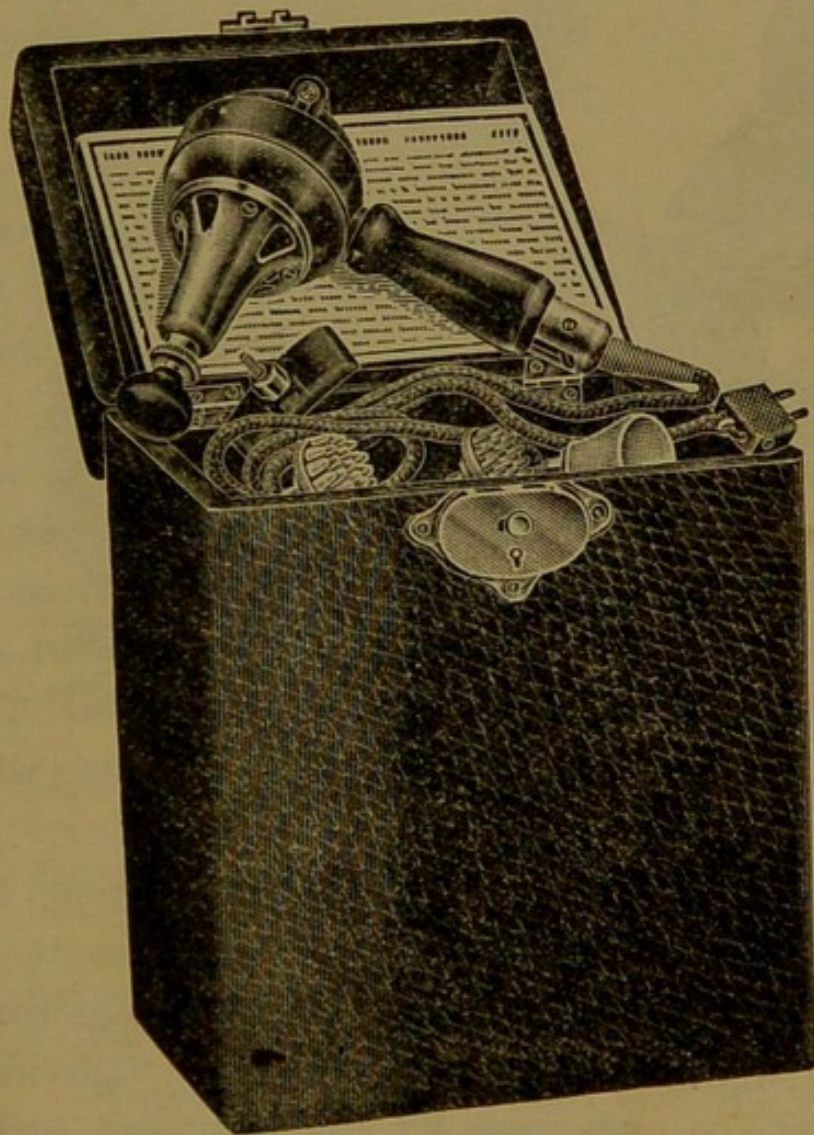
combined. The vibrator is the Premier type No. 2237 fully described on preceding page and the Electro-Medical Coil and fittings are the same as used in the Apollo Medical Apparatus also fully described on another page.

The Medical Apparatus is arranged on a black enameled hinged plate which can be raised into the open cover while the vibrator is being used. A compartment is arranged under the Medical Apparatus plate for the Massage Vibrator and Applicators, also the contact receptacles for connecting batteries and vibrator.



List No. 2239
Showing Medical Apparatus
and Electrodes.

The holding case is covered with black leatheroid cloth and fitted with leather covered handle and heavy nickel-plated hinges and lock.



List No. 2239

Showing Massage Vibrator and
Electrodes with Medical
Battery shelf raised.

The following medical apparatus electrodes are supplied:

Two Enameled wood handles.

Two metal hand electrodes.

Two sponge electrodes.

One foot plate.

One hair brush and

One Massage Roller electrode.

The following applicators are furnished for the Massage Vibrator:

Medium soft rubber cup,

Medium soft rubber tooth,

Flexible soft rubber tooth,

Vulcanized hard rubber spinal and hard ball applicators.

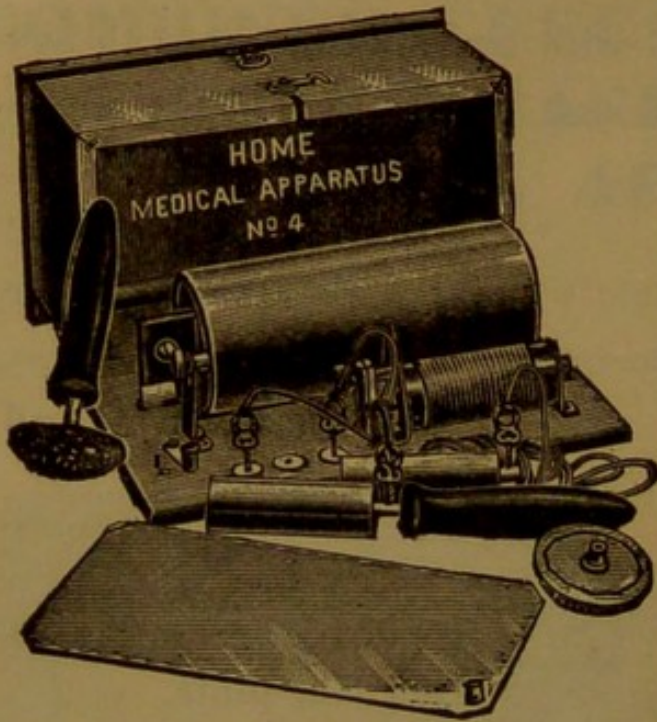
Physicians sometimes recommend Massage and Electric treatment to be applied at the same time which can be accomplished with the apparatus as it is arranged so that both can be operated simultaneously.

List No.

Price

2239 Combination Massage Vibrator & Medical Apparatus **\$40.00**

HOME MEDICAL APPARATUS.



List No. 2204

graded from the mildest perceptible to a power that few can endure.

The complete battery is contained in an elegant, highly polished oak or mahogany case, having a strong, neat, nickel-plated handle. The dimensions of the case are 9 x 5 1/4 inches, and its weight, complete with cells and electrodes, is about 5 1/2 pounds.

Physicians prescribing applications of the Faradic current for patients personally, at home, or by nurse, under specific directions,



List No. 2204

Illustration shows the Home Medical Apparatus No. 4. Case open at lower compartment showing the entire apparatus, with Battery, Coil and Electrodes complete.

The lower illustration shows the bottom compartment closed and the top one open, with the electrodes laid away as they should be when not in use.

Its currents are smooth and even, and their strength can be

will find much satisfaction in using this form of apparatus, inasmuch as, from its simplicity and entire absence of acids or liquids, it is particularly suited for the use of those who are entirely unfamiliar with the care and precautions necessary for handling the ordinary acid batteries.

An Electropathic guide with each apparatus giving full directions for using Electrodes, care of battery, etc.

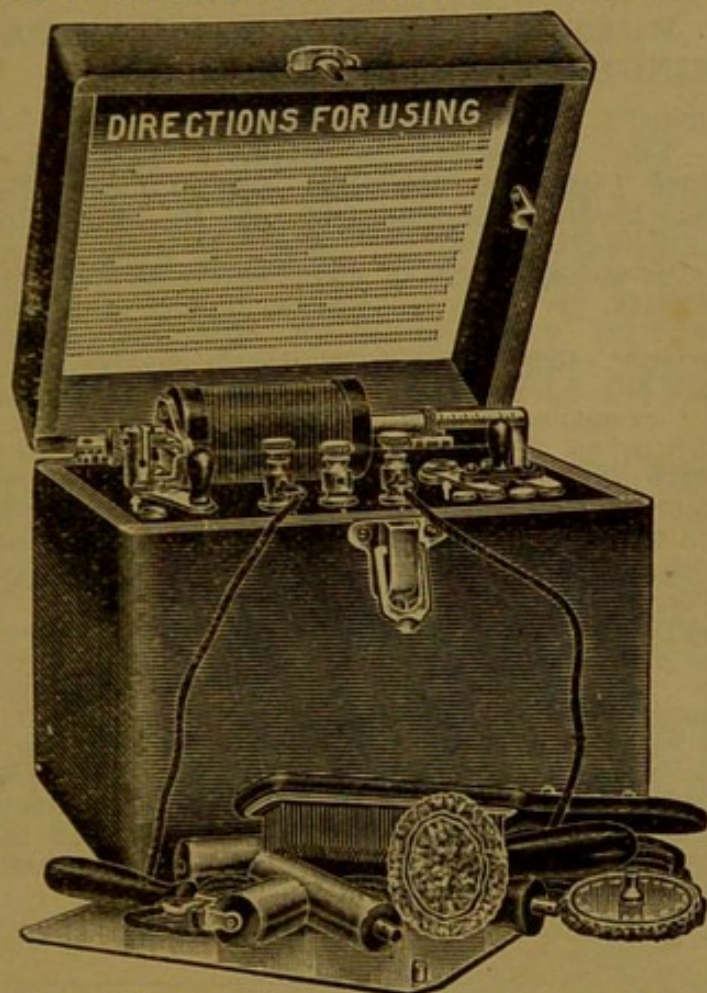
List No.

2204 No. 4 Apparatus, Battery and Electrodes, complete,

Price

\$7.00

APOLLO MEDICAL APPARATUS



The Apollo Medical Apparatus is designed to fulfill all the functions of the best grade of medical apparatus, both in appearance and efficiency.

The case is made of selected quartered oak, highly polished, size 8" high, 9" long, 7 $\frac{1}{4}$ " wide, with heavy nickel-plated trimmings and handle.

The current interrupter is scientifically constructed and embodies improvements not found in any other type of apparatus.

The primary and secondary windings of the coil are proportioned to give the best possible results under all conditions. A condenser specially designed is used in conjunction with the coil, which adds materially to the efficiency of the apparatus. This condenser with the special-wound coil eliminates the sharp jerky pulsations of the current and transmits a smooth, steady and considerably intensified flow of electricity, a combination which therapeutic experts concede is of great value in the electro-medical treatment of diseases.

A pole changing switch is arranged to change the polarity flow of current without disconnecting or changing the electrodes.

Two cells of dry battery are furnished which in conjunction with a special current controller will produce a very light or a very heavy flow of current as desired.

An Electrode Compartment, easily accessible, is arranged under the coil base, in which are placed the following electrodes and accessories:

- One nickel-plated foot plate electrode.
- Two sponge electrodes.
- One massage roller electrode.
- One hair brush electrode.
- Two nickel-plated hand electrodes.
- Two enameled electrode handles.
- Two silk-covered conducting cords.

List No.

Price

2233 Apollo Medical Apparatus complete.....\$12.00

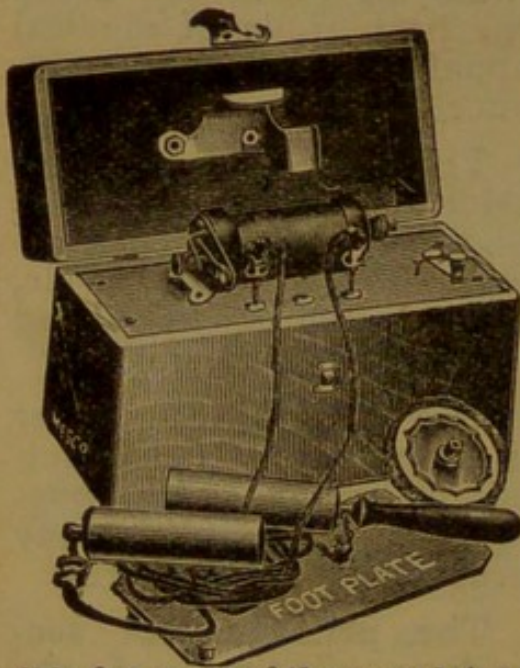
HOUSEHOLD MEDICAL APPARATUS

NO FLUIDS TO SPILL

POLISHED HARDWOOD OAK CASE

METAL TRIMMINGS NICKEL PLATED

Outside Measurements $7\frac{5}{8} \times 4\frac{1}{4} \times 3\frac{1}{2}$ inches.



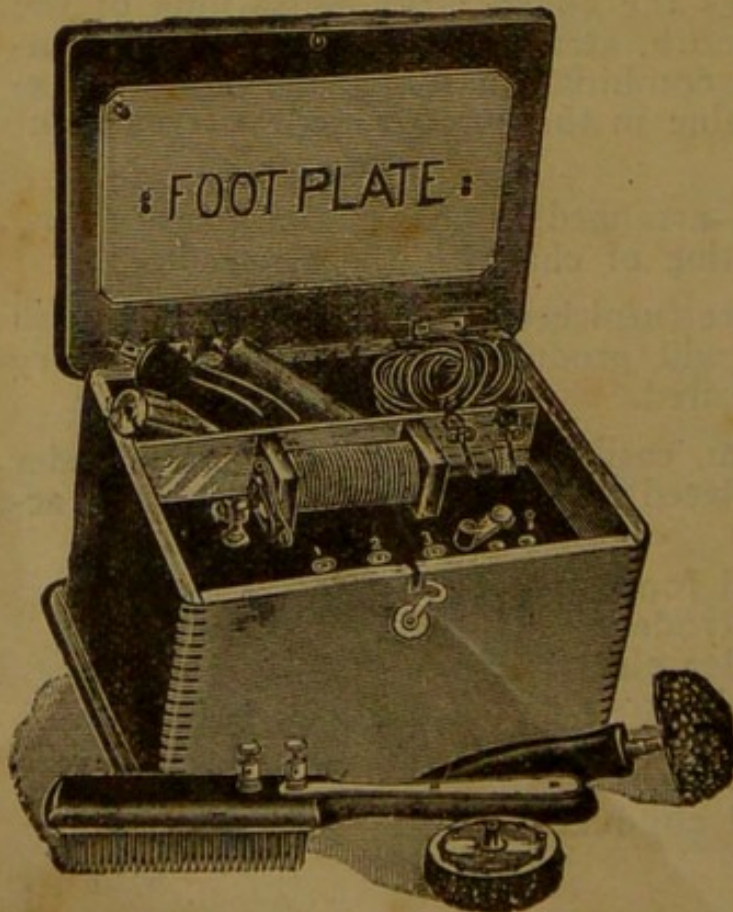
The Household is without question the most Compact, Reliable, Durable and Neatest Medical Apparatus of its kind ever manufactured.

Our many years of experience in the manufacture of Medical Apparatus has acquainted us with every phase of objection brought against the various styles hitherto in use, and led us to apply considerable thought to the construction of a form of Battery that would, as far as possible, avoid these objections and still constitute a moderate-priced apparatus. The armature and vibrating parts are an entirely new feature and so arranged that perfect adjustment is always maintained. The frame for holding the adjustable Contact Screw and Armature is made from one piece of metal and is securely fastened to the base holding the coil and to the end of the induction coil, thus insuring permanency of position for all the parts, and overcoming the trouble caused by loosening of contact parts from the base which has been respon-

sible for most of the complaints on the apparatus using a separate post for holding the contact screw. An ingeniously arranged recording scale is furnished with each apparatus to show strength of current being used.

List No. 2215. Apparatus with Battery and Electrodes, complete, Price, \$4.00

Double Cell Medical Apparatus



This apparatus is operated by two cells of Red Seal Dry Battery. Either one cell or both can be connected as desired at the two point switch. We include two sponge electrodes, two ebonized handles, hand-electrodes, two silk covered cords, one foot plate and one hair brush.

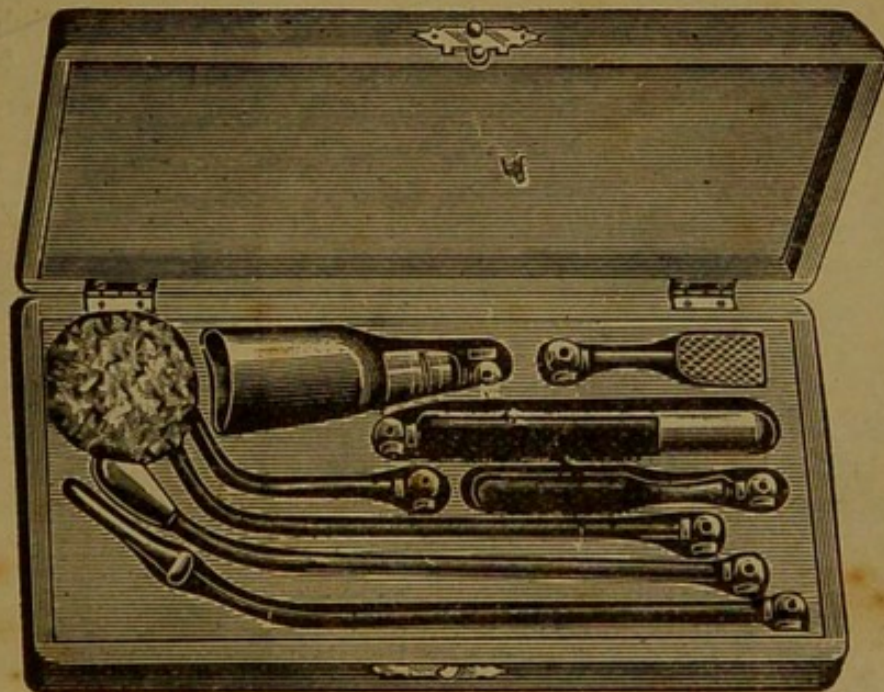
The unusually complete and excellent set of Electrodes furnished with this instrument make it very convenient in a great variety of applications for the patient, with or without assistance; for instance, in the use of two Sponge Electrodes, one in each hand, or having one of them clasped against any part of the body by means of an elastic, while the other, attached to its insulating handle, can be applied wherever desired; or, when foot plate is used and the Sponge Electrode applied from the other pole of the battery, and a great many other combinations which would naturally suggest themselves from the fact of having the electrodes with which to make them.

List No. 2225. Complete, with Electrodes.....Price, \$6.50

CASE OF ELECTRODES

OF THE MOST APPROVED FORM.

FINELY FINISHED.



CONTAINING :

1 Insulating Handle,	-	-	-	-	\$0.75
1 Sponge Electrode,	-	-	-	-	1.00
1 Eye " "	-	-	-	-	2.00
1 Ear " "	-	-	-	-	1.50
1 Throat " "	-	-	-	-	1.50
1 Tongue " "	-	-	-	-	1.50
1 Womb " "	-	-	-	-	2.00
1 Vagina and Rectum Electrode,	-	-	-	-	2.00

PRICE, complete with Case, \$12.00.

ELECTRODES

COMB ELECTRODES



This Electrode is used in connection with the hair brush electrode and can be employed with any of our medical batteries or coils.

It is made of Aluminum and is ten inches long. Has ebonized wooden handle.

List No. 2327 Comb Electrodes Price, \$1.12

HAIR BRUSH ELECTRODE



This Electrode Brush, which is used in the same way as an ordinary hair brush, furnishes suitable means by which electricity may be applied to the roots of the hair.

List No. 2355 Price.....\$1 00

WRIST ELECTRODE FOR MASSAGE TREATMENT



This Electrode is very popular for massage treatment as the sponge makes a perfect conductor of the electric current to the wrist of the operator which gives the patient the best possible results of a combination massage and electric treatment. Metal parts are made of the best material and heavily nickel-plated.

List No. 2211 Price \$1.00

Wrist Electrode with five feet Conducting cord,

FLEXIBLE RUBBER BACK SPONGE ELECTRODE



The size of this Electrode is 3 x 5 inches oval shape to fit the hand.

List No. 2311 Electrode complete. Price \$1.20

DUPLEX MASSAGE ROLLER

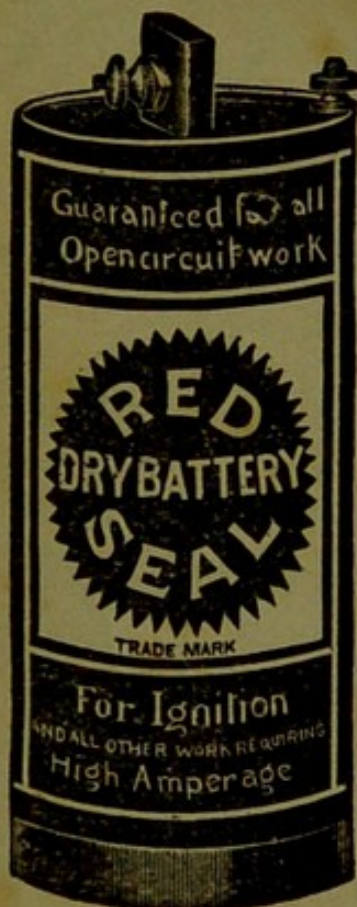


This Roller Electrode is particularly designed for localizing the application of electricity, the current passing from one roller to another instead of half-way through the body; consequently it affects only the parts which are immediately in contact with the two rollers.

The rollers are attached to an insulated bridge which is connected to the handle by a swivel joint. It also has two binding posts for the insertion of the tips of the medical cord.

List No. 2214 Duplex Massage Roller..... Price \$1.50

A Battery Suitable for Every Use



LIST No. 2445
ROUND CASE



LIST No. 2448.
SQUARE CASE

RED SEAL DRY BATTERIES

Red Seal Dry Batteries are designed for automobile, motor boat, or any system of gas or gasoline engine ignition, for operating telephone transmitters, railway and other signal devices, cautery and electro-medical apparatus, or any work for which a dry cell is qualified.

We are prepared to furnish all sizes of batteries in either round or square cartons as desired. For convenience and to prevent short circuits we strongly recommend the **SQUARE** cases.

MADE IN THREE SIZES

Round Cartons

List No.				Price
2445	Red Seal Dry Battery	A, 2 1/2 x 6 3/4 in.,	round case	\$.50
2446	"	B, 3 x 7 1/2 "	" " "	.70
2447	"	C, 3 1/4 x 8 1/2 "	" " "	.90

Square Cartons

2448	Red Seal Dry Battery	A, 2 1/2 x 6 3/4 in.,	square case	\$.50
2449	"	B, 3 x 7 1/2 "	" " "	.70
2493	"	C, 3 1/4 x 8 1/2 "	" " "	.90

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