



*positive - red
negative - green*

FARADIC HINTS
OR
THE FARADIC CURRENT
IN THE
TREATMENT
OF
DISEASE.

— ● —
PRICE 25 CENTS.

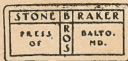
FARADIC HINTS
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VOLTAMP ELECTRIC MFG. CO.

BALTIMORE, MD., U. S. A.

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INTRODUCTION.

When the Voltamp Electric Mfg. Co. first placed its now well known instruments upon the markets of the world, it did so with that confidence of immediate recognition of merit, bred of the conviction it was offering a truly scientific and efficient product.

This confidence has not been misplaced. From the outset, our claims have been broad and positive. That the instruments have served the purposes for which they were intended, is abundantly and overwhelmingly demonstrated by the steadily increasing demand in all parts of the country.

The grounds upon which we first sought the approval of the public are as follows :

- 1.—Superiority of current generated.
- 2.—Durability.
- 3.—Portability.
- 4.—Efficiency.
- 5.—Superiority of Design.

We now desire to reiterate these claims most emphatically, and discuss them in detail.

The remarkably superior current furnished by the Voltamp Instruments is due to a variety of causes, but to no one so much as the improved and scientific method of wrapping the coils.

Not only have years of labor been expended, and tests innumerable made to attain the highest standard of perfection in this field, but the advice and experience of many prominent Electro-Therapists, in this country and abroad, has been added to our own discoveries.

The coils are wound so as to be peculiarly adapted to the Voltamp dry cells, and the cells manufactured so as to be especially suited to the coils of our instruments. This results in a coil so wrapped, and an interrupter, or "buzzer," so contrived as to produce currents which meet all the requirements laid down as requisite for medical treatment by the most advanced students and thinkers in the field of Electro-Therapy.

The dry cells employed in our apparatus are the result of years of the most elaborate and exhaustive experiment and research in the field of electro-chemistry. The experience of those who have spent a lifetime in the manufacture of the dry cell has been coupled with that of chemists of recognized ability, as an outcome of which, we are now offering the public a dry cell

which is incomparably superior to all others of its kind.

One by one, the former great objections to this type of cell has been mastered, and we are now placing upon the market a cell which is as nearly non-polarizing as it is possible to make it, with a high voltage, a low internal resistance, and a quick recovery. With the greatest accuracy and nicety of calculation, the relative amount of current each cell should properly supply is determined in proportion to its size. The internal resistance is made as low as is consistent with the dimensions of each style of cell. We deem it inexpedient for a cell of small size to furnish too high a current, as obviously the life of the cell will be materially shortened by such a process.

A feature of our instrument which will, perhaps, more readily impress an intending purchaser than any other, is the compact and convenient form of the entire apparatus. The pleasing, tasteful appearance of the case is a good criterion of its contents. After removing the strap and opening the lid, even the most exacting critic cannot fail to be more than pleased, as the scientific arrangement of coils, switches and Current Regulator unfold, more eloquently than words, the highest possible development of mechanical ingenuity and skill.

Our dry cells are neat, and precisely adjusted, free from corrosive salts, and do not give off the noxious

vapors present with all styles of fluid batteries. Moreover, there is no danger of ruining the clothing or carpets, as with the liquid apparatus, where there is constant liability of overturning the jars and spilling the powerful acids, which leave destruction in their path.

The battery can be thrust under the buggy seat and jolted over rough roads without fear of injury, and, whenever called upon, will be found ready for immediate service.

But an elegant finish and design are by no means the only essential features of a complete and thoroughly efficient Electro-Medical Apparatus. The instrument must be durable and strong, must furnish a variety of currents suitable for all cases in which faradism would be employed. Moreover, these currents must be so perfectly governed and controlled by a suitable rheostat or Current Regulator as to avoid all danger of sudden and unpleasant shocks, which would at once tend to destroy a patient's confidence in the treatment, to say nothing of the chance of positive harm, thus tending to nullify the good effects which a proper application of the current through a reliable controller might accomplish.

In the manufacture of Electro-Medical Apparatus, perhaps no one thing has bewildered and perplexed the most experienced more than the production of a suitable and satisfactory rheostat or Current Regulator. Of recent

years, a few such instruments have attained a very high standard of efficiency, and are of undoubted therapeutic value. Yet the cost of such apparatus is very great, the outlay required for these rheostats alone being as much or more than for one of our complete instruments.

Prior to the introduction of the "FULD CURRENT REGULATOR", the manufacture of a complete rheostat for graduating the electric current with minuteness and accuracy, from a quantity so small as to be imperceptible to the naked hands up to a sufficient amount for those whose temperaments are such as to permit the passage of heavy currents through their systems, and at the same time one that could be sold at a moderate figure, had been abandoned as impracticable.

We have solved the problem satisfactorily to ourselves after untiring effort and diligent research. Our claim for the "FULD CURRENT REGULATOR" is that it is fully equal in efficiency to any similar rheostat manufactured today, no matter what the price.

It consists of a resistance body of graphite under a hard rubber base, and by means of a contact shoe passed gradually over this bed of graphite, the current is governed with the greatest nicety and exactness at the will of the operator.

We are now placing on the market a complete Electro Medical outfit at a less price than is usually asked

for a Current Controller alone, despite the fact that our own rheostat is fully equal to, if not superior, to them all.

Special attention is invited to the switch connections and binding posts. The practiced eye will at once recognize and appreciate the substantial and absolute character of these appurtenances. Instead of loose sockets, and consequent faulty connection of conducting cords, we have provided binding posts with a positive screw contact, which clamp the free ends of cord tips firmly, thus rendering impossible an uneven, jerky current.

In like manner, and with the same precision, the switches are all instantaneous and unfailing in their action. The moment any particular switch is brought into play, a quick response will be received from the current which it controls, and an evenness and unbroken steadiness of flow not surpassed by any of the highest priced instruments on the market.

From the outset, we have striven to give the public a thoroughly reliable Electro-Medical outfit, the equal in every respect of the most expensive obtainable, suitable for physician and layman alike, and at a price within the reach of all. Our conscientious belief is that we have succeeded, and we therefore cordially invite a most searching investigation of our claims, and solicit correspondence from any who may be interested in our products.

THE FARADIC CURRENT.

The Faradic Current, produced by these instruments, is named in honor of its discoverer, Michael Faraday. The apparatus for generating this current consists of a core of soft iron surrounded by two coils of insulated wire, one superimposed upon the other. A rapidly interrupted current from a galvanic battery passes through that coil which is next to the iron core, known as the *primary* coil. This rapid interruption is brought about by means of an *automatic interrupter*.

The *Interrupter* on our instruments consists of an upright post, from the top of which extends a horizontal spring. At the free end of the spring, which is opposite one end of the soft iron core, is attached a button of soft iron. To this post is attached one pole of the galvanic battery, the wire from the other pole, after having passed through the primary coil, being attached to another upright, through whose top passes a thumb screw, the point of which is just in contact with the above mentioned spring, forming what is known as a *point of contact*, thus completing the circuit.

When the current is turned on, and passes through the primary coil, the soft iron core is transformed into a *magnet*, which attracts the button on the end of the spring, this draws the spring away from the above described contact point, thus breaking the circuit. The moment the circuit is broken, the button is released from the magnet, the spring returns once more to the contact point, and so on indefinitely, as long as the instrument is kept in operation.

By adjustment of the above mentioned thumb screw, the "*hum*" of the interrupter can be made to assume either a high or low musical note. The higher the note the more rapid the interruption.

By this simple arrangement, we can secure interruptions varying in number from a few hundred to several thousand per minute.

As we have said before, the primary coil is that coil which is immediately next to the soft iron core, while the coil surrounding the primary coil is known as the *secondary*.

To obtain a current from the primary coil, its wires are tapped close to the ends, and thus from this coil we obtain what is known as an *induced interrupted* current. This current is quite different from that obtained from the secondary coil.

The rapidly interrupted current from the primary coils always flows in one direction, i. e., from the positive to the negative pole, and the observer will readily perceive that in the use of the coil, one pole, the negative, or cathode, is much stronger than the positive or anode.

The current from the secondary coil we designate as an *induced alternating* current, that is to say, it is an induced current, but instead of always flowing in one direction, as in the primary, each interruption, i. e., with each "make" the current flows in one direction, while with the "break" the direction of the current is reversed, hence the term "*alternating*." That it is also interrupted goes without saying.

In the section of this little work devoted to treatment, the proper poles to be used and the methods of application will be clearly indicated.



Use of the Faradic Current for Treatment.

This current is used in a variety of ways, (a) direct faradization, (b) in faradic massage, (c) in the faradic bath and douche.

a. Under direct Faradization, which signifies that both poles are in contact with the body, are included.

1st. General Faradization.

2nd. Local Faradization.

1. **General Faradization** signifies the application to the entire surface of the body, and is proceeded with as follows:—Using large sponge electrodes, one is applied to some portion of the body where the skin is not very sensitive, and known as an *indifferent spot*, (preferably the nape of the neck, over the breast bone, on soles of feet,) and kept stationary, while the other is passed in succession over one portion of the body at a time, until the whole body, *with the exception always of the head*, has received its application, the strength of the current being varied from time to time to suit the sensibility of the parts over which the electrode is passing. The

selection of poles varies with the trouble treated, as indicated in the section of this book on the treatment of the various diseases.

2. **Local Faradization**, in which one pole is stationary at one of the points indicated above, an indifferent spot, and the other is applied to the affected part only, where it is either held stationary also, or passed gently back and forth at the discretion of the operator.

The selection of the poles is indicated in the section on treatment of various diseases.

b. **Faradic Massage**.—One pole placed on an indifferent spot, the other pole applied either through a massage roller electrode or some such appliance, or by the person giving the treatment having this pole in contact with some portion of his body, thus making the current enter or leave the patient through the medium of the hand or hands, which the operator uses in the massage movements. Poles indicated as before in section on treatment.

Faradic Bath or Douche.

c. **Bath**.—If the tub be tin, then a frame-work of wood or some non-conducting material must be used to protect the body from contact with the metal tub to which

one pole is attached, while the other is applied to some portion of the body which is not immersed.

If the tub be of some non-conducting material, such as porcelain, wood, or fibre, then one of the electrodes, a large metal plate, protected from contact with the body, by a large non-conducting frame work, is placed close to the back of neck, while a smaller one similarly protected is placed in the water at the foot of the tub. The temperature of the bath should be between 80° and 100° Fahrenheit.

Faradic douche is given as follows:—One pole is applied at an indifferent spot, while the other is attached to a douche nozzle electrode which is held from six to twelve inches from the body, the stream being the conducting medium.



SPECIAL TREATMENTS.

Abscesses.—The current must only be used when an abscess is threatened, that is, when there is redness, pain and swelling, and before pus or matter is formed. This application must immediately be stopped if the pain is increased. Use primary coil, rapid interruptions, negative pole to an indifferent spot, positive pole gently rubbed over the affected part. The current should be mild, and an application of five minutes' duration, two or three times daily.

Acne. (Pimples on Face.)—If the case is acute, use primary coil, rapid interruptions, positive pole over affected part, negative at an indifferent spot. If case is chronic, the negative pole should be used over the affected part, while the positive is applied to an indifferent spot. Mild currents should be used, and continued from three to six minutes, night and morning. Food should be carefully masticated, all rich articles of diet avoided, and strict attention paid to the condition of the bowels.

Ague Cake, of Malaria. (Enlarged Spleen.)—Electricity is of value in conjunction with proper medical

treatment. Use secondary coil, rapid interruptions, with the positive pole at an indifferent spot (more particularly the back of the neck), while the negative is applied all over the region of the spleen. Fairly strong currents of five minutes' duration, night and morning. General faradization is also of benefit in these cases.

Alopecia. (Tendency to Baldness.)—Primary coil, rapid interruptions, sponge electrodes. Negative pole to affected parts, positive to an indifferent spot. Mild currents, five to ten minutes' duration. If roots of hair have been destroyed, it is too late to expect improvement from any treatment.

Anaesthesia, Local. (Numbness, or loss of Sensation.)—Primary coil, slow interruptions, negative pole to affected part, positive to indifferent spot, sponge or wire brush electrodes, strong currents as can be borne, five to ten minutes daily. General faradization is a valuable auxiliary in this treatment.

Aphonia, Functional. (Nervous Loss of Voice.) Primary coil, slow interruptions, positive pole to front and side of neck, negative pole at nape of neck. Sponge electrodes. Strong currents, three to five minutes application.

If external treatment is not sufficient, a laryngeal electrode may be used, but only by skilled hands.

Apparent Death, Suspended Animation, or Trance.—Either or both coils coupled, slow interruptions, negative over heart and lungs, positive at nape of neck, sponge electrodes. Gradually increase current until patient shows signs of returning animation. As improvement progresses, the strength of current may be moderated. Care should be observed to have an abundance of fresh air in the apartment. While this and other restoratives, such as ammonia, are being applied, a physician should be summoned.

Anaemia. (Poverty of the Blood.)—General Faradization in the form of either massage, or both, in conjunction with proper medical treatment, will often assist most materially.

Asthma.—Secondary coil, rapid interruptions, negative to back of neck, positive over sides of neck, and over chest; mild current, sponge electrodes five to ten minutes.

Constipation.—Either coil, preferably primary, rapid interruptions, negative pole over abdomen, sponge electrodes, positive to indifferent spot. Strong currents ten to fifteen minutes, either night or morning. General Faradization and electric baths are both of value. The recovery is accelerated if patient is careful to establish regular habits, and use such articles of diet as figs, prunes, stewed fruits and green vegetables.

Corns.—Primary current, rapid interruptions, small ball sponge electrode. Apply positive pole to corn, negative to indifferent spot. Five or ten minute applications once daily.

Crick in the Neck. (Wry Neck.)—Secondary current, rapid interruptions, sponge electrodes, positive pole to affected muscles, negative in hand or over breast bone. Fairly strong current five to fifteen minutes, night and morning.

Crick in the Back, Lumbago.—Treatment same as above, except that positive pole is applied all over the tender region of the back.

Cramps in Muscles.—Primary coil, rapid interruptions, positive to affected part, negative indifferent spot, sponge electrodes, five to ten minutes' duration.

Chlorosis.—Same as in Anaemia.

Coryza. (Cold in the Head.)—Primary current, rapid interruptions, negative to nape of neck, positive over bridge of nose, sponge electrodes, very mild current, two minutes' duration, twice daily.

Debility, General.—General faradization, secondary coil, once daily. Positive to nape of neck, negative over rest of body, sponge electrodes, mild currents. Electric bath once or twice a week. Electric treatment

should be fortified by regular habits and occupation, mild exercise, properly clad, in the open air.

Dyspepsia.—General faradization ten to fifteen minutes daily, secondary coil, positive to nape of neck, negative over entire body, sponge electrodes, moderate current. Electric bath once a week. Nothing can be expected of any treatment unless the patient lends his assistance in avoiding those articles of diet which he *knows* disagree with him. Regularity of the bowels must be maintained.

Eczema.—Secondary coil, rapid interruptions, positive pole over affected parts, negative to indifferent spot, sponge electrodes, mild currents, five to ten minutes daily. This only is an auxiliary to proper local medicinal treatment.

Enlarged Glands.—Primary coil, rapid interruptions, positive pole to affected glands, negative to indifferent spot, medium strength of current, five or ten minutes daily. Patient should take regular exercise, properly clad, in the open air, eat plenty of good nourishing food, and pay attention to regularity of the bowels.

Goitre, Exophthalmic.—Primary coil, rapid interruptions, negative to an indifferent spot, positive over goitre, mild current, sponge electrodes, five minutes' duration, once daily.

Gout.—Primary coil, rapid interruptions, negative pole to indifferent spot, positive pole to affected part. Sponge electrodes, mild currents, five minutes' duration twice daily. To be immediately discontinued if pain is aggravated. Of much greater benefit in chronic than in acute cases.

Headache.—Secondary coil, positive pole all over the seat of pain, negative to base of neck, sponge electrodes, *very* mild current. If this fails, try the primary coil. This chiefly for temporary relief. The source of the headache should be located, looked into, and corrected.

Headache from Indigestion.—Secondary coil, slow interruptions, positive to nape of neck, negative over stomach, liver and bowels, sponge electrodes. A mild aperient will often assist this treatment greatly.

Hiccough, Persistent.—Secondary coil, rapid interruptions, positive pole over pit of stomach, and along lower margin of ribs. Negative pole at sides of neck. Fairly strong current two or three minutes at a time repeated quite frequently if necessary.

Hyperchondriasis, or Melancholia.—General faradization, secondary coil, positive at nape of neck, negative over other portions of body, fairly strong currents, five to ten minutes night and morning, sponge electrodes. Faradic bath once a week. Improvement

will be very rapid if patient will pay particular attention to the acquirement of regular habits, steady occupation, and systematic, gentle exercise, properly clad, in the open air.

Hysterical Affections.—Electricity is of great value when applied by physicians' directions.

Hemorrhoids.—(See Piles.)

Impotence, Functional.—Secondary coil, rapid interruptions, negative in both groins, and over perineum, positive to nape of neck. Mild currents, sponge electrodes, five to ten minutes daily. General faradization and electric baths are also of great value. General tonic treatment and out-of-door exercise are valuable auxiliaries.

Incontinence of Urine.—Secondary coil, negative pole on perineum, positive at nape of neck, mild current, sponge electrodes, five to ten minutes on retiring.

Indigestion.—See Dyspepsia.

Inflammation.—See Abscess.

Insomnia.—General faradization, secondary coil, positive at nape of neck, negative over body. Moderately strong current, sponge electrodes, ten to twenty minutes before retiring. Or, electric bath before retiring.

Joints, Sprained.—Primary coil, rapid interruptions, positive pole to affected part, negative to indifferent spot, moderate current, sponge electrodes, five to ten minutes twice daily.

Jaundice.—Secondary current, interruptions not too rapid, positive to an indifferent spot, negative all over liver and front, sponge electrodes, strong currents, five minutes' duration night and morning.

Locomotor Ataxia.—Primary coil, rapid interruptions, positive pole over breast bone, negative up and down spine, medium current ten minutes daily in connection with occasional general faradization.

Liver, Torpid.—See Constipation.

Muscular Atrophy.—Either coil, preferably secondary, rapid interruptions, negative to affected parts, positive to indifferent spots, fairly strong currents, sponge electrodes ten minutes daily. General faradization and tonic treatment are valuable auxiliaries.

Migraine.—See Headache.

Neuralgia.—Secondary coil, rapid interruptions, positive to affected part, negative to indifferent spot, medium strength of current, sponge electrodes five to ten minutes' duration once or twice daily. General faradization once a week. Tonic treatment, and proper regulation of life are valuable auxiliaries.

Nose Bleed.—Secondary coil, rapid interruptions, positive to bridge of nose, negative to nape of neck. Mild current, sponge electrodes, five to ten minute applications. Patients should sit quietly in an upright position.

Paralysis.—Electricity is of great value in almost all paralysis, but should only be used under the guidance and instruction of a physician. As a rule, the secondary coil should be used, rapid interruptions, the negative pole being applied to the affected part, while the positive pole is applied to some indifferent spot. Currents of moderate strength and sponge electrodes should be used. Five to ten minutes once a day usually sufficing.

Paraplegia.—See paralysis.

Piles.—Electricity is chiefly of value in this affection in the avoidance of constipation. (See paragraph on the latter.) This is usually the underlying cause.

Prostrate, Enlarged.—Secondary coil, rapid interruptions, negative to perineum, positive to indifferent spot, medium current, sponge electrodes, ten minutes daily.

Rheumatism, Muscular.—Primary coil, slow interruptions, positive to affected part, negative to indifferent spot, strong currents, sponge electrodes, ten to fifteen minutes daily.

Seminal Emissions.—Primary coil, rapid interruptions, positive pole in groins, and to perineum, nega-

tive to indifferent spot, medium current, sponge electrodes, ten to fifteen minutes twice weekly before retiring. General faradization, not more than once a week. This treatment is assisted by the patient's being careful to empty the bowels and bladder, before retiring, and to avoid sleeping on back.

Sciatica.—Primary coil, rapid interruptions, negative to indiffenent spot, positive to affected part, strong currents, sponge electrodes, five to ten minutes' duration twice daily.

Shingles.—Primary coil, rapid interruptions, negative to indifferent spot, positive over affected part, sponge electrodes, mild current five to ten minutes duration, twice daily, if necessary. The application is best made to the affected part through a single layer of thin muslin well wetted, thus avoiding all danger of increasing the inflammation by too much friction.

Vomiting.—Secondary coil, rapid interruptions, negative pole to nape of neck, positive over pit of stomach. Medium current, five to fifteen minutes duration according to circumstances.

VOLTAMP DRY CELLS.

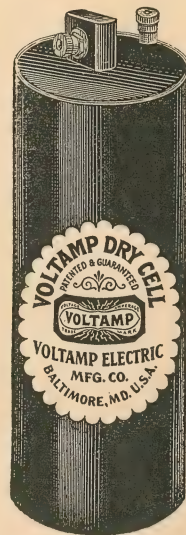


VOLTAGE
EACH,
15.

PRICES
ON
APPLICATION.



Style V, Faradic.
" U, Galvanic.

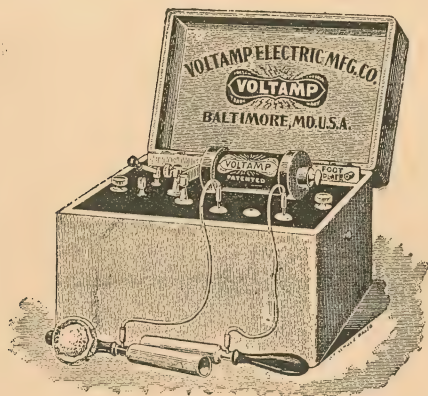


Style X, Standard.

THESE CELLS ARE SUPERIOR IN
Quality, Efficiency and Durability.

Voltamp Battery No. 1.

"HOME COMFORT."



Although one of the smallest instruments of our manufacture, the same care and precision is exercised in its construction as with the higher-priced apparatus. The current strength, also, while not as great as in the others will be found amply sufficient for family use.

This instrument furnishes three currents, primary, secondary, and combined. Put up in a handsome finish cherry case. Dimensions, $7\frac{3}{4} \times 4\frac{3}{4} \times 5\frac{1}{4}$.

There is no other electro-medical outfit manufactured to-day which combines so many features of superior excellence, and is sold at the same price.

Voltamp Battery No. 2.

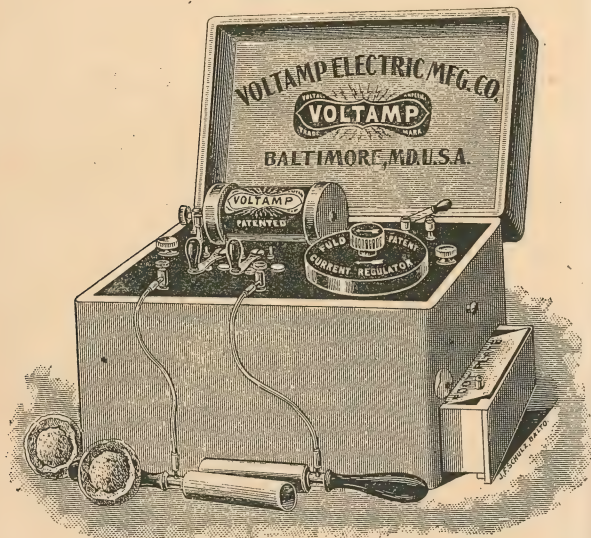
"SOLACE."



A larger instrument than the No. 1, and offering greater facilities.

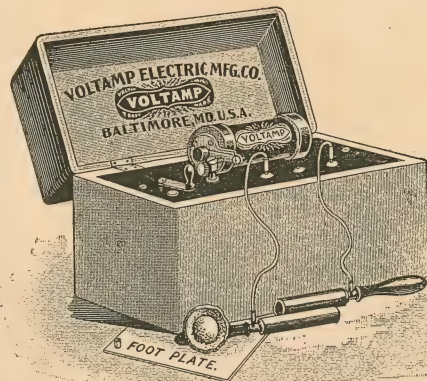
The induction coil supplies three currents, primary, secondary, and combined. Provided with FULL CURRENT REGULATOR, and metal binding posts having screw contact, thus insuring uniform and unbroken current flow. Suitable alike for both physician and layman. Dimensions of case, $9\frac{1}{4} \times 5\frac{1}{2} \times 7$.

Voltamp Battery No. 3. "RELIEF."



This instrument is supplied with three coils, a primary and two secondaries, thus placing five distinct currents at command of the operator. Has double the strength of the two foregoing instruments, switch connections, FULD CURRENT REGULATOR, etc., and entirely adequate for the requirements of any case in which faradism would be employed. While designed especially for physicians' use, it will still be found invaluable in the home. Unquestionably the most complete and efficient faradic machine ever before offered at anywhere near the same price. Dimensions of case, $10\frac{3}{8} \times 6\frac{3}{8} \times 7\frac{3}{4}$.

Voltamp Battery No. 5. "LITTLE GEM."



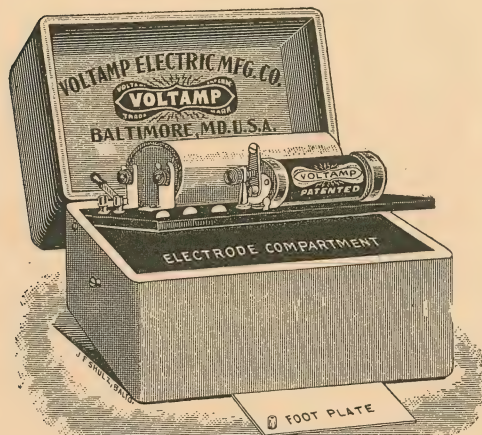
Although the smallest instrument of our manufacture, the same care and precision is exercised in its construction as with the highest priced apparatus. The current strength, also, while not as great as in the other, will be found amply sufficient for family use.

This instrument furnishes three currents, primary, secondary and combined. Put up in a handsomely finished cherry case.

The convenient form of this instrument makes it especially attractive, combining many features of superiority. Dimensions, $7\frac{1}{2} \times 3\frac{3}{4} \times 4\frac{3}{4}$.

VOLTAMP BATTERY No. 4.

"SAMARITAN"



Showing Electrode Compartment Open.

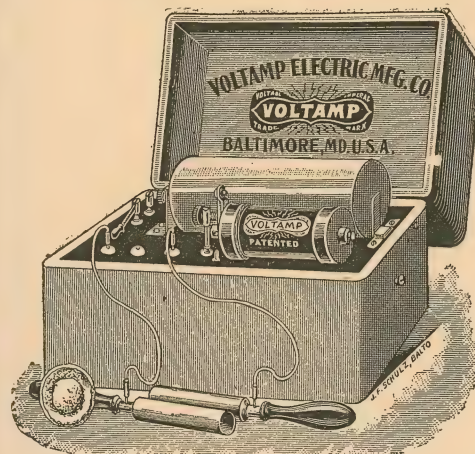
The convenient form and superior construction of this handsome battery will at once commend it to those in search of a complete electro medical outfit at moderate cost.

Many unique improvements suggested by our long experience in this field, will be found only in this instrument, and their value quickly recognized.

Though lower in price than other styles, the same painstaking care and precision of adjustment is exercised as in the most expensive instrument.

VOLTAMP BATTERY No. 4.

"SAMARITAN"



Showing Electrode Compartment Closed.

Among the many attractive features to be found in this instrument is our Non-Short-Circuiting Switch, by means of which it is impossible to destroy the cells of the battery, when not in use. As the battery lid is closed down, the knife-switch is automatically thrown open, thus breaking the circuit. The apparatus furnishes three currents: primary, secondary and combined. Put up in a handsomely finished cherry case. Dimensions, $8\frac{1}{2} \times 5\frac{1}{8} \times 5$ inches.

A thorough investigation of our claims is earnestly invited before placing your order for a Medical Battery.

Standard Size Dry Cell Batteries.

Although the special size and shape Voltamp Cells are very generally preferred by our customers, because of their compactness and convenient size, experience has shown us that many users of Faradic instruments are more or less prejudiced in favor of an apparatus, containing Standard Size Cells, owing to the fact that renewable cells for the latter can be procured of the Electrical Supply Houses throughout the entire country, or where there are no surgical instrument stores, thus dispensing with the necessity of ordering fresh cells through a local dealer, or, where found more convenient, direct from the factory.

Besides, our position as manufacturers of standard medical batteries has grown to such proportions, by reason of their ever increasing popularity, that we find it expedient from time to time to devise numerous additional patterns, in order to meet the views of our many new patrons, who order batteries in vast quantities.

Therefore, we are now listing all our instruments formerly supplied solely with the smaller (V) size Cell with the usual standard (X) size dry cell, but under different catalogue numbers, as follows:

Our No. 7,	with Standard Size Cell,	otherwise same as our No. 1.
" 11,	" " " " " "	" " " 2.
" 12,	" " " " " "	" " " 3.
" 6,	" " " " " "	" " " 4.
" 8,	" " " " " "	" " " 5.
" 9,	" " " " " "	only.
" 10,	" " " " " "	only.

Directions for management of these batteries are supplied with each instrument, and correspond in all respects with directions as printed herein for similar instruments with smaller cells, the size of the cell employed having no influence whatever upon the *modus operandi* of the battery.



PATENTS GRANTED.

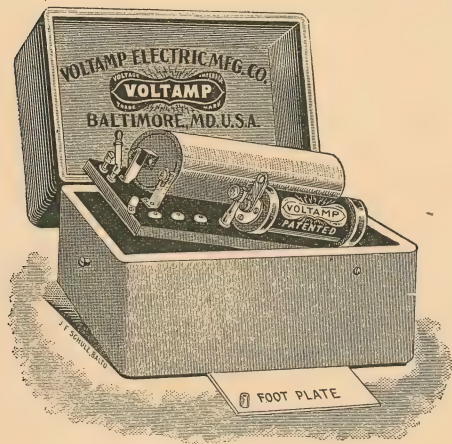
The Dry Cells and Medical Batteries produced by this Company are fully protected by patents of the United States and Great Britain as follows:

U. S. Pat. on Current Controller,	granted May 24, 1892.
" " " " Regulator,	" Jan. 10, 1899.
" " " Induction Coil,	" Feb. 21, 1899.
" " " Cell,	" June 27, 1899.
" " " Battery Case, etc.,	" July 2, 1901.
G. B. " " Current Controller,	" July 20, 1895.
" " " " Regulator,	" Mch. 27, 1899.
" " " Induction Coil,	" Feb. 9, 1899.
" " " Cell and Case,	" June 2, 1899.
" " " Battery Case, etc.,	" Sep. 15, 1900.

OTHER PATENTS PENDING.

Voltamp Battery No. 6.

"MAJESTIC."



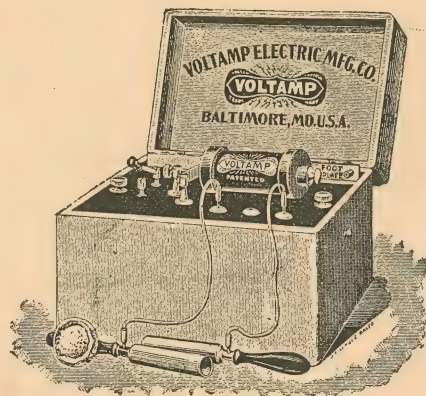
Equipped with Standard Size Cells.

Otherwise the same as Voltamp Battery No. 4.

Dimensions, $8\frac{3}{4} \times 5\frac{1}{2} \times 5\frac{3}{8}$.

Voltamp Battery No. 7.

"OLYMPIA."



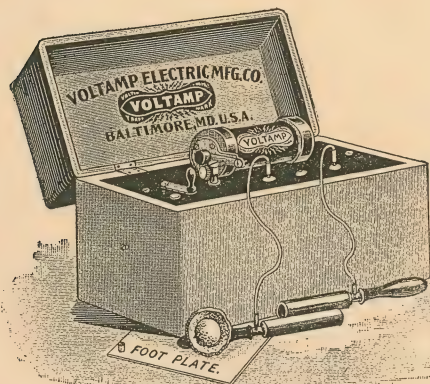
Equipped with Standard Size Cells.

Otherwise the same as Voltamp Battery No. 1.

Dimensions, $8\frac{1}{2} \times 5 \times 5\frac{3}{8}$.

Voltamp Battery No. 8.

"FIRESIDE."



Equipped with Standard Size Cells.

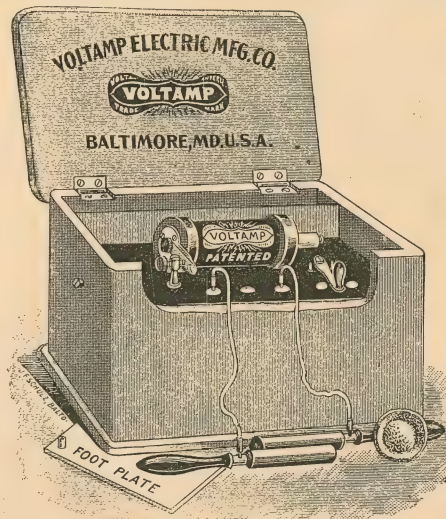
Otherwise the same as Voltamp Battery No. 5.

Dimensions, $8\frac{1}{2} \times 3\frac{3}{4} \times 5\frac{1}{8}$.

Voltamp Battery No. 9.

"IMPERIAL."

EQUIPPED WITH STANDARD SIZE CELLS.

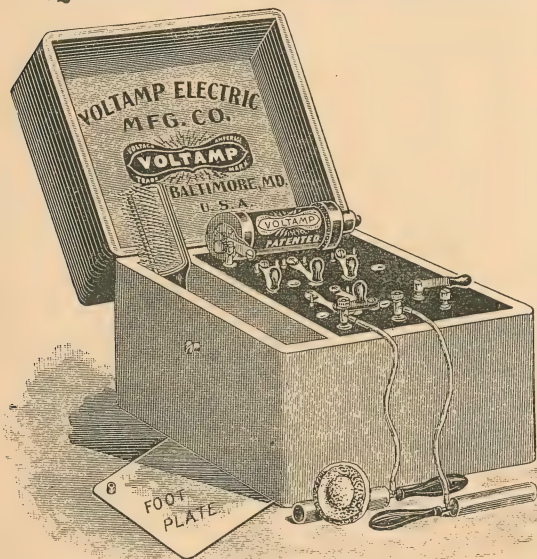


Although one of the smallest instruments of our manufacture, the same care and precision is exercised in its construction as with the highest priced apparatus. The current strength, also, while not as great as in the other, will be found amply sufficient for family use. This instrument furnishes three currents, primary, secondary and combined. Put up in a handsomely finished oak case. The convenient form of this instrument makes it especially attractive, combining many features of superiority. Dimensions, $8\frac{3}{4} \times 5\frac{1}{4} \times 5\frac{1}{4}$.

Voltamp Battery No. 10.

"CROWN."

EQUIPPED WITH STANDARD SIZE CELLS.



This instrument is furnished with two cells, constructed to give very much stronger currents than can be obtained from any usual battery. It contains an extra high tension and powerful Coil, supplying three currents, primary secondary and combined; also a Coil Selector for selecting the primary, secondary or combined currents; a Pole Changer and Cell Selecting Switch. Furnished with the apparatus are a pair of Conducting Cords, two Metallic Handles, two Wood Handles, a Foot Plate, two Sponge Electrodes and a Metallic Hair Brush. The latter is also recommended for *Veterinary* purposes. Dimensions, 8x8x5 $\frac{1}{2}$.

Voltamp Battery No. II.

"INVINCIBLE."



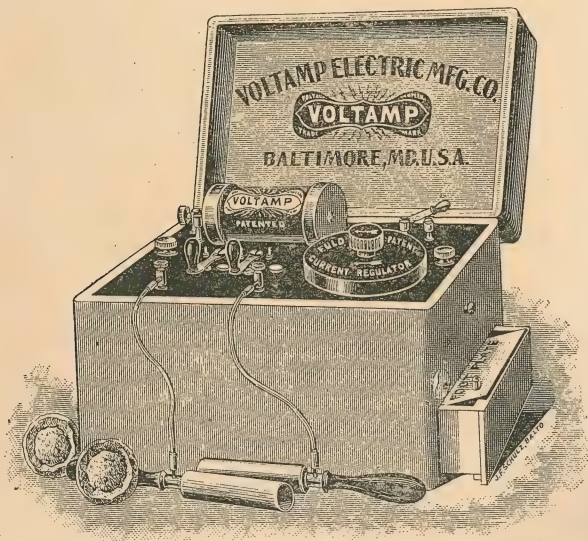
Equipped with Standard Size Cells.

Otherwise the same as Voltamp Battery No. 2.

Dimensions, 9 $\frac{1}{4}$ x5 $\frac{1}{2}$ x7.

Voltamp Battery No. 12.

"CHAMPION."

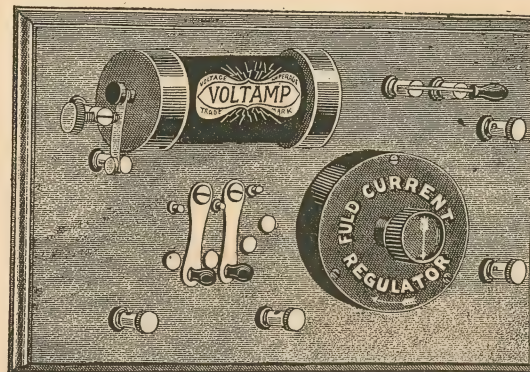


Equipped with Standard Size Cells.

Otherwise the Same as Voltamp Battery No. 3.

Dimensions, $10\frac{3}{8} \times 6\frac{3}{8} \times 7\frac{3}{4}$.

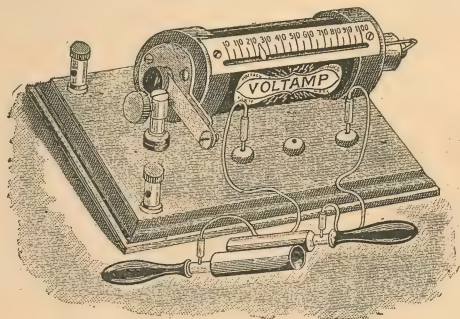
Voltamp Bath Cabinet Plate, With Faradic Coil.



This instrument is intended to be used with suitable electrodes in a bath tub. The Coil is very powerful and, with two Voltamp Cells (Type X) in circuit, the current is carried through the electrodes and then through the entire body. The Coil and Regulator are similar to those employed in the No. 3 Battery and fully described on a previous page. Complete with two large Voltamp Cells, long Conducting Cords and large Nickel-Plated Electrodes for head and foot of the tub.

PRICE, - - - - \$15.00.

Voltamp Faradic Coil.



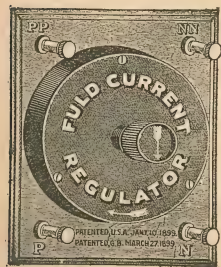
This little instrument is similar to the coils used on our Nos. 1 and 4 batteries. All Voltamp Coils are patent wound, providing a current about four times as strong as that of ordinary coils of equal size, and sufficient for family use. It is provided with a calibrated scale and index, showing the amount of current consumed with each operation. Complete with Cords, Canulas and Handles.

PRICE, - - - \$2.50.
VOLTAMP CELLS, extra, each, - .50.

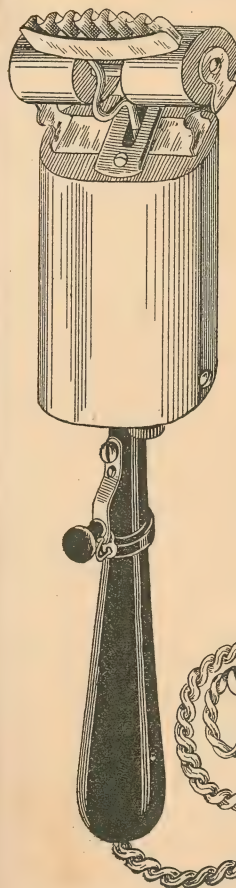
FULD Current Regulator.

For graduating the electric current with minuteness and accuracy. Mounted, ready for use.

PRICE, - - - \$2.00.



THE FARADO-MASSEUR.



A combination of facial massage and faradic current. The corrugated lever being set in rapid motion by means of any battery, rejuvenates and restores the nerve centers, and this treatment is rendered doubly efficacious by reason of the assistance of a mild faradic current, which is well known to be incomparable for the purpose of stimulating and building up sluggish tissues. The instrument produces an agreeable sensation, and the excellent results following its use will be apparent from the beginning. A delicate adjustment in the rear regulates the vibrating lever from the gentlest motion up to a strong, sharp blow.

**A New and Invaluable
Instrument for both
Physician and Layman.**

Price, Complete with 2 Voltamp
Cells, \$10.00.

CAUTION. To Prevent the Waste of Elements.

The circuit is "closed" immediately when the knife switch is thrown into its socket; or, if the battery is provided with a lever switch, when this is turned on the stud or button.

The Battery cells are in use only when the *circuit is closed*, consequently the life of the cells will be prolonged by *not* starting the battery until everything is ready for the application, and turning them off as soon as through.

The Rheotome, or Current Interrupter, should commence to "*hum*" or vibrate as soon as the circuit is closed; if it does not, a slight tap with the finger will usually serve to put it in motion. An adjustment of the vibrator contact screw is not often required though when it is necessary, a slight turn in either direction will soon put it in good working order.

The contact screw should be adjusted so that the vibration will give an even, continuous "*hum*" or "*buzz*"; it should never be turned so far as to press the vibrating spring against the coil-core.

Never, under any circumstances, put the instrument to work through a "*short-circuit.*" A "*short circuit*" may be made in a variety of ways, as follows:

By allowing the vibrator spring to cease buzzing while the circuit is closed. This may occur from not having contact screw properly adjusted.

By bringing the electrodes together when connected with the battery.

By dipping the electrodes together in the same vessel of water when connected with the battery.

It occasionally happens, when the instrument has been subjected to continuous use, that a black deposit forms upon the small platinum plate of the vibrator spring, or upon the platinum point of the contact screw. Under these circumstances the battery may refuse to properly respond. To remove this deposit, loosen the vibrator spring attached to upright post, by means of a small screw driver, so that the said spring can be readily swung upward (taking pains not to bend it) and remove the deposit by means of a sharp pen knife, as though erasing an ink mark. The deposit on contact screw may be removed in like manner. After replacing spring in position, see that the hammer rests squarely in the centre of the magnet; then tighten the screw which holds the spring in position. Special caution should be observed in such an operation to see that the vibrator spring is not bent or twisted in any manner from its original shape, otherwise it may refuse to give the proper results.

Where sponge electrodes have been employed, care should be observed to squeeze them quite dry before returning to their proper receptacle, otherwise, the working parts of the instrument may be corroded.

Fresh cells are to be obtained of any live Surgical Instrument, Electrical Supply or Drug House.



How to Remove Exhausted Cells and Replace Them with Fresh Ones.

The cells of these instruments are concealed from view in a compartment or receptacle provided for them beneath the top plate, or in metal shell on top plate, in Nos. 4 and 6. When they become exhausted, and it is therefore necessary to replace them with fresh ones, remove the large milled head thumb nuts at either end of the battery plate, and lift the plate out of the case, when the cells will be exposed to view. Next, unscrew the milled-head thumb nuts at end of cell, when the latter is readily removed, and may be replaced by a fresh one. When placing new cells in the battery it is **ABSOLUTELY IMPERATIVE** that the binding post marked "Z" should rest in the slot marked "Z." It will be noted that batteries Nos. 1, 5, 7 and 8 are secured at the ends with screws instead of thumb nuts. Also, that with batteries

Nos. 4 and 6, the cells being in the metal shells, it is not necessary to remove the top plate of battery in order to remove the cell.

The nuts should be firmly screwed into place again on the new cells in precisely the same manner as they were found before removing the old cells. Return the top plate of the instrument to its original position, when everything will be in good working order again.

By this simple arrangement, complications will be avoided, and the popularity of the apparatus will always remain the same.



Directions for Voltamp Batteries Nos. 1 and 7.

TO START THE CURRENT.—This is accomplished by throwing the knife switch firmly into its socket, when the vibrator should immediately commence to "buzz".

The three sockets marked "1," "2" and "3," to the front of the apparatus, are to receive the electrode conducting cords.

To obtain the primary (or so called direct) current, insert the tips of conducting cords in sockets marked "1" and "2". The socket marked "1" is negative, and "2" positive.

To obtain the secondary (or induced) current, insert the tips of conducting cords in sockets "2" and "3." The socket marked "2" is then negative, and "3" positive.

To obtain the combined primary and secondary currents, insert tips of conducting cords in sockets marked "1" and "3". Socket marked "1" is then negative, and "3" positive.

The currents are weakest when the metal sheath is completely enveloped and hidden by the coil and can be gradually increased or diminished by drawing the sheath out or returning it to its original position.



Directions for Voltamp Batteries Nos. 2 and 11.

TO START THE CURRENT.—This is accomplished by throwing the knife switch firmly into its socket, when the vibrator should immediately commence to "buzz".

The three binding posts marked "1," "2" and "3," to the front of the apparatus, are to receive the electrode conducting cords.

To obtain the Primary (or so-called direct) Current, insert the tips of conducting cords in binding posts marked "1" and "2". The binding post marked "1" is then positive, and "2" negative.

To obtain the Secondary (or induced) Current, insert the tips of conducting cords in binding posts "2" and "3." The binding post marked "2" is then positive, and "3" negative.

To obtain the combined primary and secondary current, insert the tips of conducting cords into binding posts marked "1" and "3." Binding post marked "1" is then positive, and "3" negative.

How to Operate the Fuld Current Regulator.

The arrow on Regulator knob should always point directly toward the small star or asterisk on the base, when the instrument is at rest. By turning this knob slowly in the direction indicated by the curved arrow on base, immediately above the star or asterisk, the current is gradually increased, and correspondingly diminished when the knob is turned in the opposite direction. When through the application, return the knob to its proper place; with the arrow thereon pointing directly towards the star at bottom of regulator.



Directions for Voltamp Batteries Nos. 3 and 12.

TO START THE CURRENT.—This is accomplished by throwing the knife switch firmly into its socket, when the vibrator should immediately commence to "buzz."

The two binding posts marked "N" and "P", to the front of the apparatus, are to receive the electrode conducting cords.

To obtain the Primary (or so called direct) Current, the left hand switch, between the induction coil and binding posts, should rest upon button marked "1", and the right hand switch upon button marked "2".

To obtain the first secondary (or induced) current, the left hand switch should rest upon button marked "2", the right hand switch upon button marked "3".

To obtain the second secondary (or induced) current, the left hand switch should rest upon button marked "2", the right hand switch upon button marked "4".

To combine the primary with the first secondary, the left hand switch should rest upon button marked "1", the right hand switch upon button marked "3".

To combine the primary with the second secondary, the left hand switch should rest upon button marked "1", the right hand switch upon button marked "4".

The currents are controlled by the FULD CURRENT REGULATOR, in same manner as with the No. 2 battery. See page 49.



Directions for Voltamp Batteries Nos. 4 and 6.

To START THE CURRENT.—This is accomplished by throwing the knife switch firmly into its socket, when the vibrator should immediately commence to "buzz."

The three sockets marked "1," "2" and "3," to the front of the apparatus, are to receive the electrode conducting cords.

To obtain the Primary (or so-called direct) Current, insert the tips of conducting cords into sockets marked "1" and "2." The socket marked "1" is negative and "2" positive.

To obtain the Secondary (or induced) Current, insert the tips of conducting cords in sockets "2" and "3." The socket marked "2" is then negative, and "3" positive.

To obtain the Combined Primary and Secondary Current, insert the tips of conducting cords in sockets marked "1" and "3." Socket marked "1" is then negative, and "3" positive.

The currents are weakest when the metal sheath is completely enveloped and hidden by the coil, and can be gradually increased or diminished by drawing the sheath out, or returning it to its original position.

The electrodes and accessories will be found beneath the top plate of battery. To remove them, press the small catch, found on the front of the instrument to the left; in the No. 6, turn the small angle piece to the left, which permits the battery plate to be raised up by means of the coil, or otherwise, when the electrodes will be brought into view.

Directions for Voltamp Batteries Nos. 5, 8 and 9.

TO START THE CURRENT.—This is accomplished by throwing the switch on the button, when the vibrator should immediately commence to "buzz."

The three sockets marked "1," "2" and "3," to the front of the apparatus, are to receive the electrode conducting cords.

To obtain the Primary (or so-called direct) Current, insert the tips of conducting cords in sockets marked "1" and "2". The socket marked "1" is negative and "2" positive.

To obtain the Secondary (or induced) Current, insert the tips of conducting cords in sockets "2" and "3". The socket marked "2" is then negative, and "3" positive.

To obtain the combined Primary and Secondary Current, insert the tips of conducting cords in sockets marked "1" and "3". Socket marked "1" is then negative, and "3" positive.

The currents are weakest when the metal sheath is completely enveloped and hidden by the coil and can be gradually increased and diminished by drawing the sheath out, or returning it to its original position.

Directions for Voltamp Battery No. 10.

DESIGNATION AND POSITION OF SWITCHES, ETC.

The Cell-Selecting Switch is to the right below the coil, with studs marked "1" and "2". When switch rests on "1" there is one cell, and when on "2" there are two cells in circuit. The Double Switch, back of the binding posts, is known as the "Pole-Changer," and is used for changing the Polarity of the battery; the binding post nearest to which this switch is thrown is "Positive," and the other "Negative." The Double Switch, back of the pole-changing switch, is the "Coil Selector," for obtaining the different coils, and for combining them.

TO START THE CURRENT.—This is accomplished by throwing the knife switch firmly into its socket, when the vibrator should immediately commence to "buzz."

The two binding posts to the front of the apparatus, are to receive the electrode conducting cords.

To obtain the Primary (or so-called direct) Current, the left-hand switch should rest upon button marked "1," and the right-hand switch upon button marked "2."

To obtain the secondary (or induced) Current, the left-hand switch should rest upon button marked "2" and the right-hand switch upon button marked "3."

To obtain the combined currents, the left-hand switch should rest upon button marked "1," and the right-hand switch upon button marked "3."

The strength of all the currents can be varied by moving the regulator or core-shield of the coil; the further out this shield is drawn, the stronger the currents become.

THE GALVANIC CURRENT.

As will have been fully noted, the faradic current is of vast efficiency as a remedial and curative agent in a large number of cases; yet there are certain lines of work to which the faradic battery is not so well adapted as is its silent neighbor, the GALVANIC, and in some instances it would altogether fail.

A Galvanic battery consists of a number of cells connected together, so as to directly discharge their current without the aid of a coil of wire. While such a battery is simpler in construction than the faradic machine, yet the sensation produced by the current is wholly different, as well as the therapeutic effect.

A Galvanic battery produces no sensation whatever, except a slight suggestion of heat or burning, and it not unfrequently happens that where a patient has been accustomed to the more vigorous "shock" of a faradic battery, when the treatment is altered and the galvanic current applied, he will complain and insist that there is no current passing whatever. As a matter of fact, however, the galvanic current has vastly more *pen-*

etrative power, and strikes deeper at the root of disease, than is possible with the faradic. Hence, it follows that in the hands of a skilled physician, the galvanic current is more highly esteemed than is the faradic but as, with few exceptions, considerable experience and skill is absolutely essential to success, we will therefore, in this little work confine ourselves entirely to a few of the simpler treatments, in which there is no possibility of resultant harm from a failure to follow directions, and at the same time, much real benefit and relief from physical suffering is sure to follow its intelligent use. When properly administered, it is one of the greatest known aids to modern medical science.

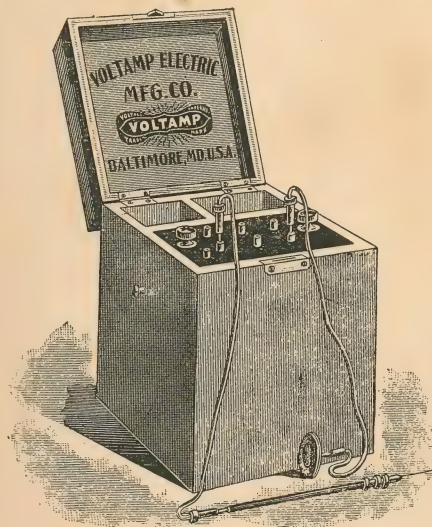
In employing the galvanic current, to achieve success, it is of the *utmost* importance to observe that the proper POLE of the battery is used. Otherwise, total failure will often result and the benefits sure to follow from an intelligent use of the instrument, are wholly lost.



VOLTAMP

Six Cell Galvanic Battery.

PRICE, \$10.00.



This instrument is carefully designed for home use, in cases requiring but a small amount of current, such as are elsewhere mentioned in this book, and especially in THE REMOVAL OF SUPERFLUOUS HAIR. The cells are arranged in series, so that any desired number, from one to six may be used. The following accessories are included in the price: One pair of Con-

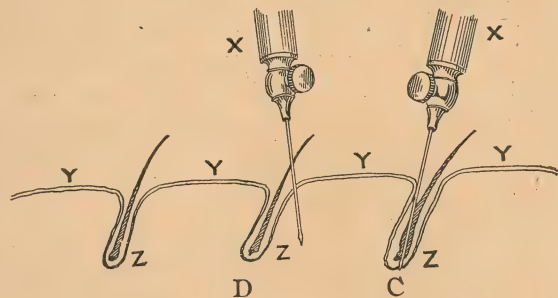
ducting Cords, one pair of Wood Handles, one pair of Canulas, one pair of Sponges, one Needle Holder, two Steel Needles, one pair of Epilating Forceps and one Self-Holding Lens. Put up in a handsomely finished Cherry Case. Dimensions: $6\frac{3}{8} \times 5\frac{5}{8} \times 6$.

Removal of Surperfluous Hair and Facial Blemishes by Electricity.



The persistent growth of hairs on the face has been an untold source of annoyance and discomfort to many ladies. Various chemical preparations have been advertised and sold, time out of mind, guaranteed to correct this evil, and to *permanently* destroy the growth. They are all frauds, so far as the feature of permanency is concerned. They nearly all contain quick-lime and arsenic, both of which substances are highly injurious to the skin. If carefully used, such preparations will, for the time being, remove the growth, but only to see it return in a short time, coarser and more objectionable than at first.

There is but one *sure* way to *permanently* remove superfluous hair, and that is by the aid of the electric needle. Even then, to insure perfect success, the utmost care must be taken to follow directions to the letter.

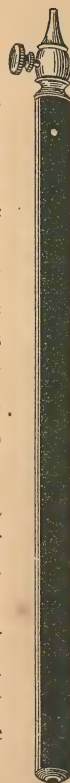


The accompanying engraving, highly magnified, shows two ways of inserting the electric needle, C being the correct method, and D the incorrect one. The secreting surface that furnishes the nourishment for the development and growth of the hair is at the end of the root, which is anywhere from one-eighth to three-sixteenths of an inch beneath the surface of the skin. This follicle must be *totally* destroyed, otherwise the operation is fruitless. However, when once destroyed, it never re-forms.

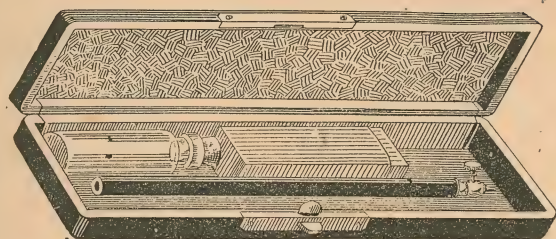
Referring again to the engraving, Y Y Y Y is the surface of the skin; Z Z Z the end of the root and point to which the needle must reach in order to effectually destroy the growth.

In this operation, a galvanic battery *only* can be used. Take one of the battery cords and attach one free end to the needle-holder, the other free end being attached to the *negative* pole of the battery. The other cord, after attachment to the *positive* pole of the battery, should be armed at the other end with a sponge electrode, to be held in the hand of the patient. The number of cells to be employed depends upon the delicacy of the patient's skin, and the resistance of the hairs to be removed. From three to six cells will always answer. All being ready, carefully introduce the needle beside the hair. A self-holding lens described and illustrated on page 69 is of incalculable assistance in this operation.

After the needle is properly inserted, in a few seconds you will observe a slight frothing around the mouth of the follicle—conclusive evidence that electrolytic action is taking place. Now remove the needle, and with a small pair of forceps grasp the hair, and if the operation has been properly performed it will yield readily to the gentlest traction. This completes the operation.



NEEDLE CASE, No. 548.



Containing Needle Holder and Six Steel
Needles, \$1.50.

GOITRE.

This distressing disease can be greatly relieved or wholly cured by the aid of the galvanic current. We would recommend any one so afflicted to consult a physician skilled in Electro-Therapy, where results of a most agreeable nature are bound to follow speedily.

FALLING OUT OF HAIR.

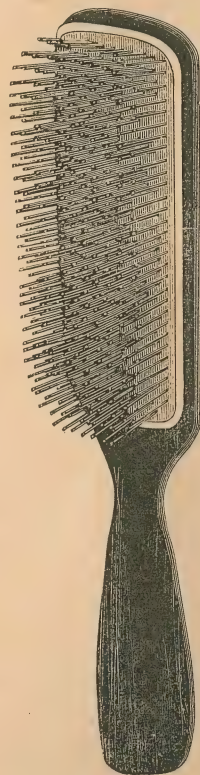
It may appear highly inconsistent to the skeptical mind, after reading the chapter on the removal of superfluous hair, to be told, almost in the same breath, that by means of the galvanic current, hair can be made to grow on the head, but such is an indisputable fact nevertheless, *provided* the hair bulbs are still alive. First, give the bald or thin spot a vigorous massaging with the

hands, and if there is a ruddy glow produced, it is pretty good evidence that there is still hope, and if the galvanic battery is properly applied, the hair can be made to grow again, luxuriantly on the baldest scalp.

Apply the *negative* pole gradually all over the scalp, with the positive pole held in the hand. Use about six cells of the battery, and for ten minutes at each treatment. This will act in the double capacity of a strong tonic, and stimulant to the hair-bulbs, and if persisted in, gratifying results are sure to follow in every instance.

People are apt to pay little or no heed to the first stages of this most disfiguring loss of hair, until it has gained great headway.

If the proper efforts are made to check it in its incipency, in almost every instance a cure is certain to follow. The faradic current, also, administered through the medium of our hair brush electrodes, revives and stimulates the hair bulbs and will be found to have a most salutary effect.



WARTS.

These annoying excrescences may be readily removed with the aid of a galvanic battery. Arm the *negative* pole with two or more small spear-shaped needles, and place the positive pole in the unaffected hand. Pass the needles through the wart at the base on a level with the skin, then give the full strength of your battery for five minutes. This will permanently remove the wart.

NAEVUS AND MOLES.

Connected with this treatment is that of birth-marks and moles. These are also removed by the galvanic current, preferably with a current controller and meter also in circuit. The operation is performed by placing the negative pole, fitted with the special electrode here illustrated, in which case the needles are placed firmly on the mark for removal, and are kept there from three to five minutes. If the spot is larger than the electrode, operate only on one portion of it at a time. Generally, the first treatment is executed with a current of three milliamperes, but if this is too severe lessen it and increase by degrees.



GALVANIC HINTS.

The general chemical and electro-therapeutic effects of the galvanic battery may be summed up as follows:—

First—That there is a difference in the therapeutic action of the two poles as great as the chemical action.

Secondly—That oxygen is generated at the POSITIVE pole, and hydrogen at the NEGATIVE pole.

Thirdly—That the POSITIVE pole attracts acids from the tissues, and that the NEGATIVE pole attracts alkalies.

Fourthly—That the POSITIVE pole will coagulate, while the NEGATIVE pole will liquefy.

The Inter-polar action of the POSITIVE is anodyne, sedative, denutritive, anti-hemorrhagic, and alterative.

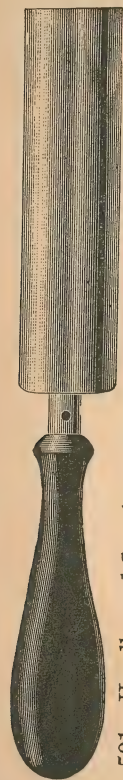
The Inter-polar action of the NEGATIVE pole is congestive and stimulating, thus absorbing by increasing the supply of blood.

The polar action of the POSITIVE pole is styptic and caustic, if high currents are employed.

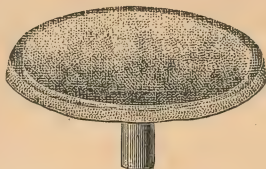
The polar action of the NEGATIVE is strongly electrolytic, and liquefying. The result will be chemical decomposition of the tissues, when mild currents are employed.

If one will learn and remember these few points, with experience he will have no trouble to decide which pole to make the active one.

ELECTRODES AND ACCESSORIES.



- 501.—Handles and Canulas, per set of two of each.....\$1.00
 541.—Ebonized Handles, each......25
 542.—Same, with Interrupter......75
 543.—Nickel Plated Canulas, each......25



- 502.—Sponge Electrode to fit handle, each......25



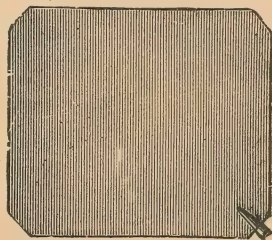
- 529.—Carbon, flannel cover, .25



- 503.—Oval Sponge, Electrode. Rubber back.....\$1.50

- 504.—Same as 503—Rectangular, 3x5.....\$1.50

- 505.—Same, 2x4..... 1.00

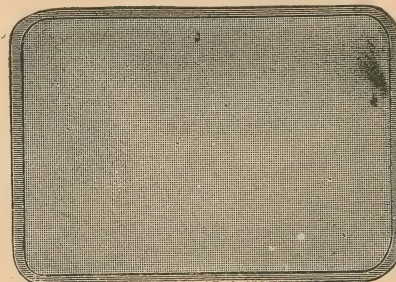


- 508.—Foot Plates..... .50

- 547.—Foot Plates, small..... .35

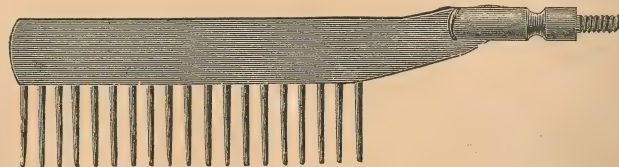


- 528.—Silk Conducting Cords, per pair......60
 Same 5 ft......75



- 530.—Felt Covered Electrodes, with soft rubber back, six sizes.

- Size 1, 3¾ x 2¾ in..... .50
 " 2, 4¾ x 3½ in..... .60
 " 3, 5½ x 3¾ in..... .70
 " 4, 7 5 in..... .95



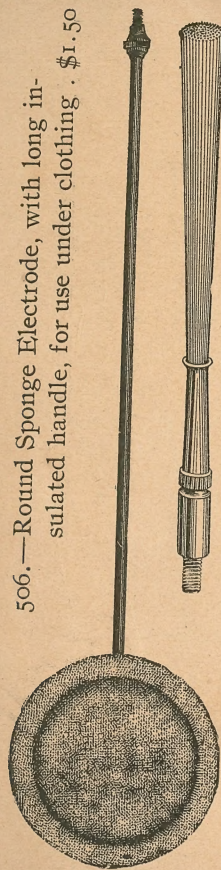
- 514.—Comb Electrode, small.....\$1.00
 515.—Comb Electrode, long..... 1.50



- 520.—Small Eye Electrode, with stem.....\$1.00



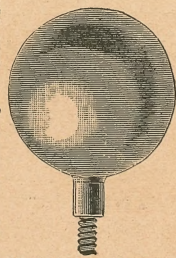
- 526.—Tonsil Electrode, with stem and ball.....\$1.00



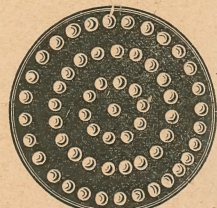
506.—Round Sponge Electrode, with long insulated handle, for use under clothing . \$1.50



516.—Metallic Scourge, or Wire Brush Electrode..... .75
540.—Same as 516. Soft Tinsel..... .75



509.—Metal Ball Electrode, .75



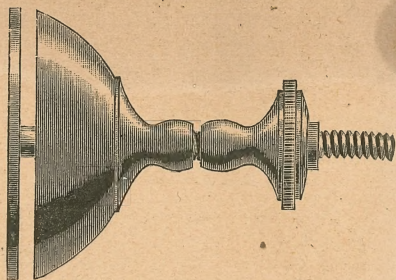
510.—Disc Rheophore, with insulated metal points \$1.50



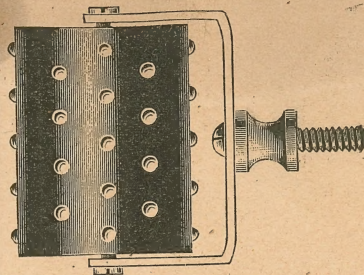
521.—Erb Pattern Electrode, large, .50



522.—Erb Pattern Electrode, Small, .50

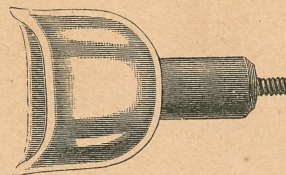


507.—Universal Absorbent Cotton, or Sponge Holder.....\$1.50

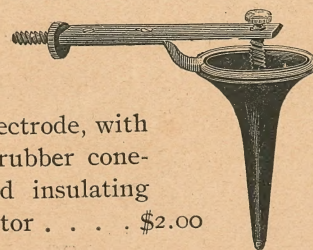


511.—Rolling Rheophore or Wheel Massage Electrode, with insulated metal points and interrupting handle. \$3.50

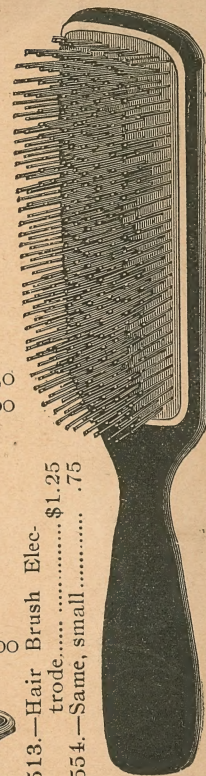
512.—Same without handle 2.00



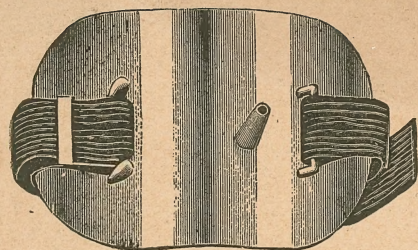
519.—Eye Cup Electrode, to be filled with water. \$2.00



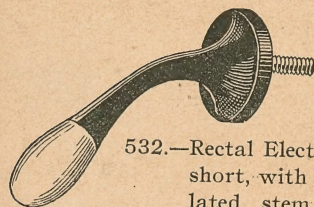
539.—Ear Electrode, with hard rubber cone-shaped insulating protector \$2.00



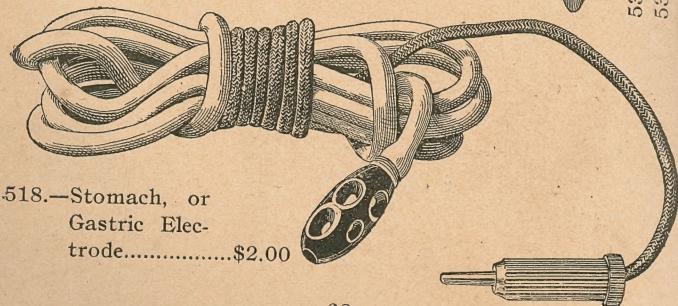
513.—Hair Brush Electrode.....\$1.25
554.—Same, small..... .75



544.—Wr'st and Neckband
Electrode.....\$1.50



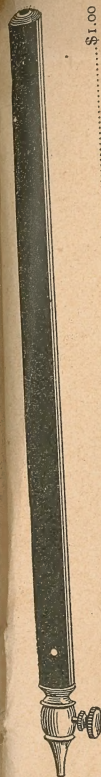
532.—Rectal Electrode,
short, with insu-
lated stem and
shield.....\$2.00



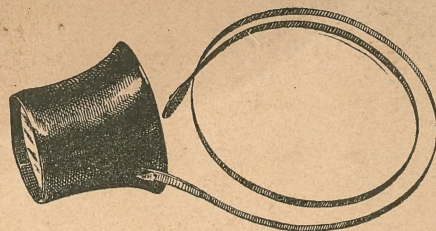
518.—Stomach, or
Gastric Elec-
trode.....\$2.00



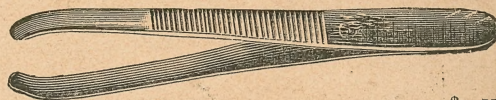
537.—Rectal Electrode, partly insulated.....\$2.00
538.—Same, All Metal..... 1.00



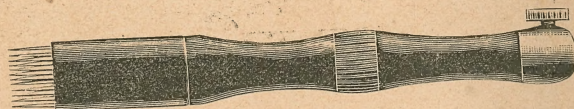
533.—Needle Holder, with set screw.....\$1.00
540.—Same, with Interrupter; will hold either broach or small needles..... 1.00



535.—Self-holding Lens, for use in removing
superfluous hair..... \$1.00



536 Epilating Forceps.....\$.75



534.—Needle Holder for removing Port Wine marks.....\$5.00

NEEDLES.

- | | |
|--|--------|
| 83.—Steel Needles for removing hair, each..... | \$.10 |
| 83.—Steel Needles for removing hair, per dozen..... | 1.00 |
| 84.—Iridio-Platinum Needles for removing hair, each... | .40 |
| 137.—Iridio-Platinum Broach Needles, each..... | .50 |
| 127.—Broach Needles, each roc., per doz..... | 1.00 |
| 128.—Bulbous-Pointed Needles, each roc., per doz..... | 1.00 |

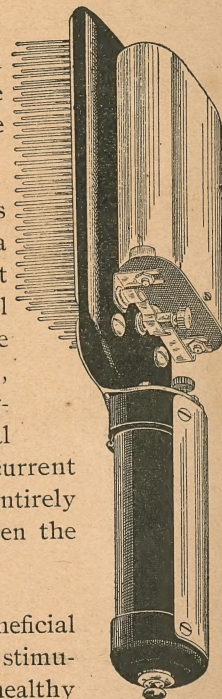
FARADIC HAIR NOURISHER.

Of all the various instruments devised and manufactured by us within the past few years, none possess more practical utility for a given purpose than the apparatus here illustrated.

Within an incredibly small compass is combined a Metallic Hair Brush, a Powerful Faradic coil, and sufficient Battery to actuate the same. The Coil serves the double purpose of a handle for the Brush, and a smooth, even, agreeable current, which can be regulated at will by means of the Metal Sheath imbedded in the coil. The current is weakest when the Sheath is entirely within the coil; it is strongest when the Sheath is withdrawn from the Coil.

This apparatus exerts a most beneficial effect upon the Capillary Ducts; it stimulates and nourishes by exciting to healthy action such of the Hair Follicles as may have become sluggish or inactive. The sensation produced upon the Scalp is most pleasing and delightful.

PRICE, \$10.00.



525.—Laryngeal Electrode, with sponge and insulated stem.....\$1.00

523.—Laryngeal Electrode, with ball and insulated stem.....\$1.00

524.—Laryngeal Electrode, with round sponge, for external use.....\$1.25

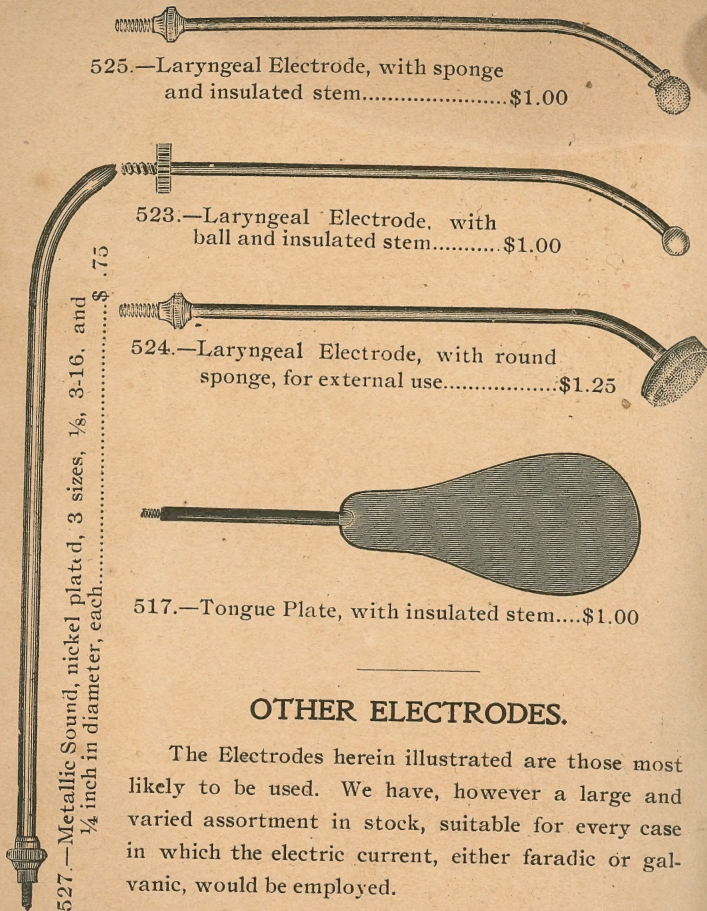
517.—Tongue Plate, with insulated stem....\$1.00

OTHER ELECTRODES.

The Electrodes herein illustrated are those most likely to be used. We have, however a large and varied assortment in stock, suitable for every case in which the electric current, either faradic or galvanic, would be employed.

527.—Metallic Sound, nickel plated, 3 sizes, 1/8, 3/16, and 1/4 inch in diameter, each.....\$.75

\$.75



TO OBTAIN VOLTAMP

Batteries, Cells and Accessories.

Our various products are usually to be had of Surgical Instrument Dealers, Drug and Electrical Supply Houses. However, should you be unable to obtain them from your dealer, order direct from us, giving the name and address of the house to whom you applied.

When Forwarding an Apparatus or Instrument to us for repairs or adjustment, be sure to have same carefully packed before shipping, and *not simply wrapped in paper*. *The name and address of the sender should appear on the package*, which should be PREPAID. Write us definite instructions, concerning the trouble, and enclose remittance to cover cost of repairs, etc.

Remittances should be made by Registered Letter, P. O. Money Order, Express Money Order, N. Y. Draft or U. S. Postage Stamps.