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KEYSTONE ELECTRIC COMPANY

ILLUSTRATED CATALOGUE AND PRICE LIST OF

Electro-Therapeutic
Appliances
Cabinets
Storage Batteries
Static Machines
X-Ray Outfits
Physiological Laboratory
Equipments

Manufactured and for Sale by

KEYSTONE ELECTRIC COMPANY,

135 South Tenth Street,

Philadelphia, Pa.

Terms

OWING to our extensive trading throughout the United States, a reasonable business rule prompts us to ask of those ordering goods, and not having a credit already established, to remit money with order, unless same is accompanied by satisfactory reference, (Philadelphia preferred).

If desired, goods will be shipped by C. O. D. express at purchaser's expense, providing remittance accompanies the order equal to one-third of the total amount of bill.

Our prices in this Catalogue are **strictly** net, discounts having been deducted.

We employ only experienced packers, who under our own supervision, pack goods with the utmost care; therefore we cannot be held responsible for breakage, and all claims of this nature must be made to the transportation companies.

We are not responsible for goods sent by mail.

KEYSTONE ELECTRIC CO.

135 South Tenth Street

Philadelphia

Introduction

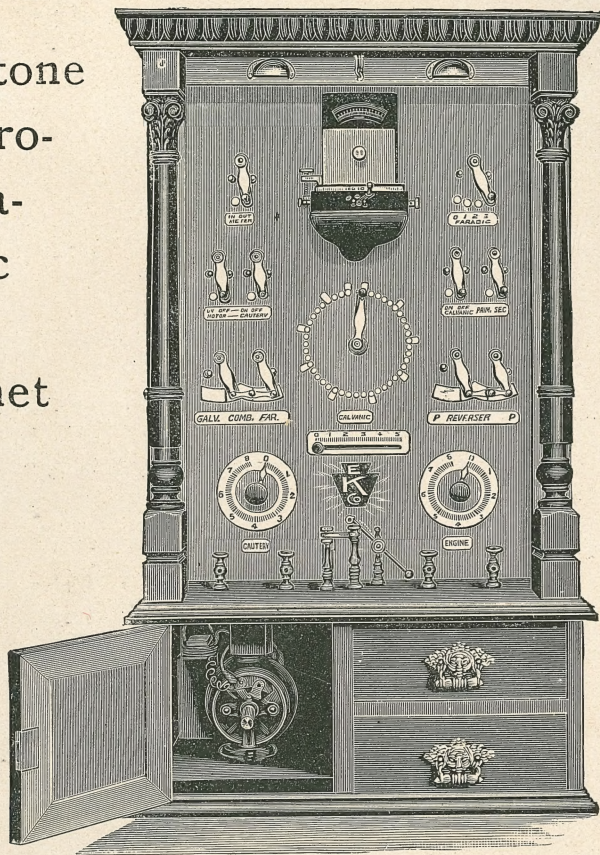
AFTER eighteen years of practical experience, and carefully studying the needs of Physicians, Surgeons, and Dentists, we have undertaken, as manufacturers of electrical instruments, to present to the Medical Profession, the modern as well as the most scientific improvements for utilizing the Electric Current for Electro-Therapy; whether obtained from Battery or Dynamic sources.

Having our factory equipped with the most improved machinery, and our employing skilled mechanics, enables us to manufacture Electro-Therapeutic instruments of the highest grade, of the best workmanship, and at the lowest possible prices.

Owing to the constant demand for special electrical appliances, which is our specialty, we are unable to illustrate such instruments in this issue, but we will be pleased to assist and furnish you with any information or manufacture anything electrical desired. Repairing of all kinds of Medical Batteries, Electrodes, etc., is also one of our specialties.

We extend you an invitation to call and examine our extensive line of goods.

Keystone Electro- Thera- peutic Wall Cabinet No. 1



THE Cabinet illustrated is one of the many styles we manufacture, and will be found more complete than any other make of cabinet made. Having given perfect satisfaction in every respect, as to its working qualities, and appearance, it can not be equaled.

It contains our latest Improved Controllers and Transformers, mounted on marble back in a highly polished hard wood, artistic cabinet, with two drawers for Electrodes, and sliding glass door. All metal parts are made of heavy brass, finely nickel plated, and every thing connected with it of the best material and workmanship.

It is very simple to operate, as beneath every switch is engraved on metal the various currents desired and as is readily seen, it is not at all complicated.

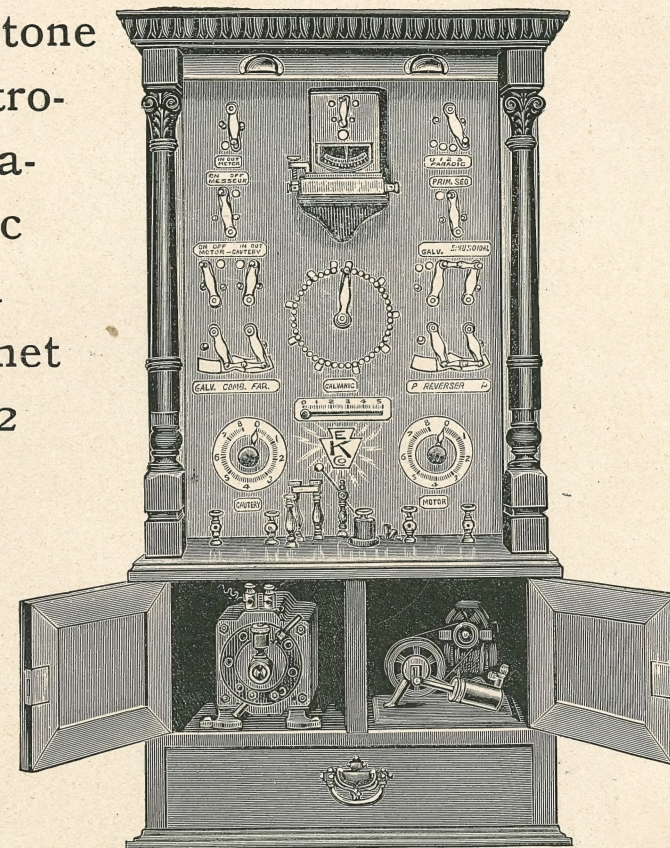
The currents obtained are Galvanic with or without meter in circuit. Faradic with rapid or slow interrupter giving current from 100 to 1500 feet of wire in circuit; a DeWatteville Switch for the combined application of Galvanic and Faradic Currents. Cautery Controller which can be used for the smallest eye to largest Cautery knife used in general practice, Rheostat to regulate the speed of Motor for Surgical Drill or Dental work. Switch to change the Polarity of current without altering the position of Electrodes while using. Controller for Diagnostic Lamps, two sets of Binding Posts for the use of Cautery and Light at one time or separate, and all necessary switches required to complete the apparatus.

It is absolutely safe and no danger of shock to patient.

Keystone Electro-Therapeutic Wall Cabinet, 110 volts direct current . . . \$200.00
Keystone Electro-Therapeutic Wall Cabinet, with Motor Dynamo for 52 to 104 volts alternating current . . . 275.00

Dimensions—Height, 3 ft. 5 in.; Width, 2 ft. 1 in.; Depth, 11 in.

Keystone Electro- Thera- peutic Wall Cabinet No. 2



THIS cabinet contains our latest Improved Controllers and Transformers, mounted on marble back in a highly polished hard wood, artistic cabinet, with one drawer for Electrodes, and sliding glass door. All metal parts are made of heavy brass, finely lacquered, and every thing connected with it is of the best material and workmanship.

It is very simple to operate, as beneath every switch is engraved on metal the various currents desired and as is readily seen, it is not at all complicated.

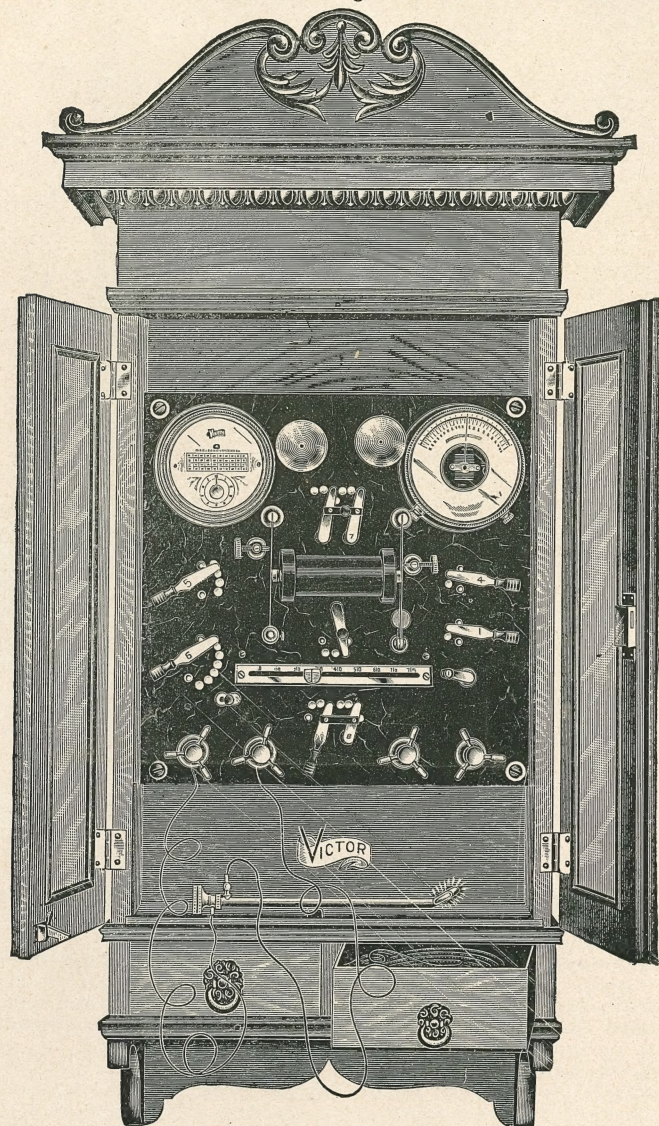
The currents obtained are Sinusoidal Galvanic with or without meter in circuit. Faradic with rapid or slow interrupter giving current from 100 to 1500 feet of wire circuit; a DeWatteville Switch for the combined application of Sinusoidal Galvanic and Faradic Currents. Special series graphite controller for eye work, Cautery Controller which can be used for the smallest eye to largest Cautery knife used in general practice, Rheostat to regulate the speed of Motor for Surgical Drill or Dental work. Switch to change the Polarity of current without altering the position of Electrodes while using. Controller for Diagnostic Lamps, two sets of Binding Posts for the use of Cautery and Light at one time or separate, switch for operating eye or ear masseur.

This cabinet differs from our number one cabinet as follows, that it has a sinusoidal current, eye and ear masseur, and a special series graphite eye controller, which makes this cabinet the most complete as well as modern outfit of its kind on the market. It is absolutely safe and no danger of shock to patient.

Keystone Electro-Therapeutic Wall Cabinet, No. 2, 110 volts direct current . . . \$225.00

Electro-Therapeutic Wall Cabinet

For use on 110, 220 and 500 Volt Direct Current



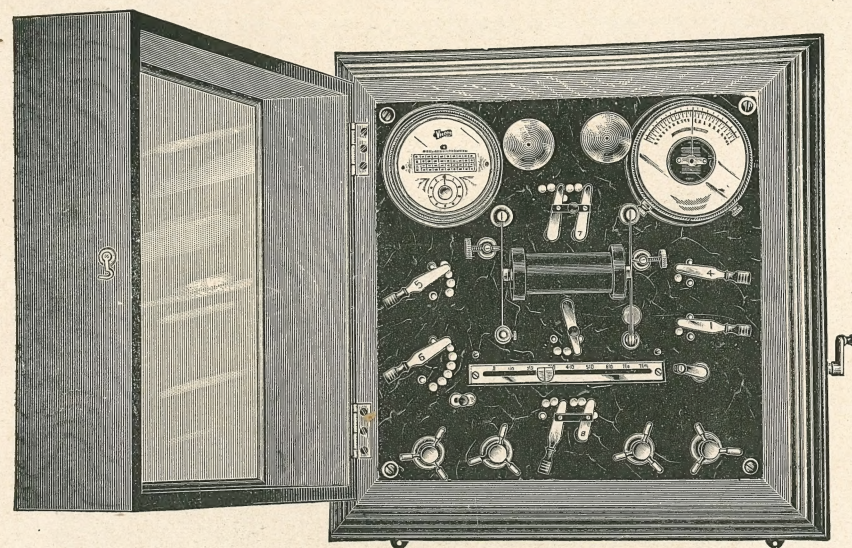
THE woodwork in above cabinet is finished in polished golden oak, the switch board is a dark Georgia marble, and the combination makes a handsome and durable finish.

The apparatus when supplied with current from a 110, 220 or 500 volt direct current, or from battery cells will deliver the following currents:

A perfectly regulated galvanic current; a current suitable for electrolysis; a current for lighting diagnostic lamps; a primary faradic; a secondary faradic; an interrupted galvanic; a combined galvanic and faradic, and a faradic current of any desired frequency.

Price, complete as shown in cut for 110 volt current	\$ 90 00
" " " " " " " " 220 " "	105 00
" " " " " " " " 500 " "	115 00

No. 4 Wall or Table Plate



THE above apparatus is similar in all respects to the \$90.00 wall cabinet with the exception that a cheaper wood cabinet is furnished; this case, however, is nicely finished in oak, and is provided with a plate glass hinged door.

Battery Cabinet

We will furnish our therapeutic plate mounted in a floor cabinet finished in golden oak with electrode drawers and 43 cells of battery placed in suitable compartment, all complete, for \$120.00, or we will furnish either our wall cabinet or plate for connection to battery cells, the price being the same as for the 110 volt with the addition of 30 cents per cell for as many batteries as desired, 43 being the number usually supplied.

500 Volt Current

Where the 500 volt current only is available the best plan is to install our \$30.00 generator, which can be operated by a $\frac{1}{4}$ H. P. 500 volt motor. The same motor may also be used to operate a static machine or air compressor.

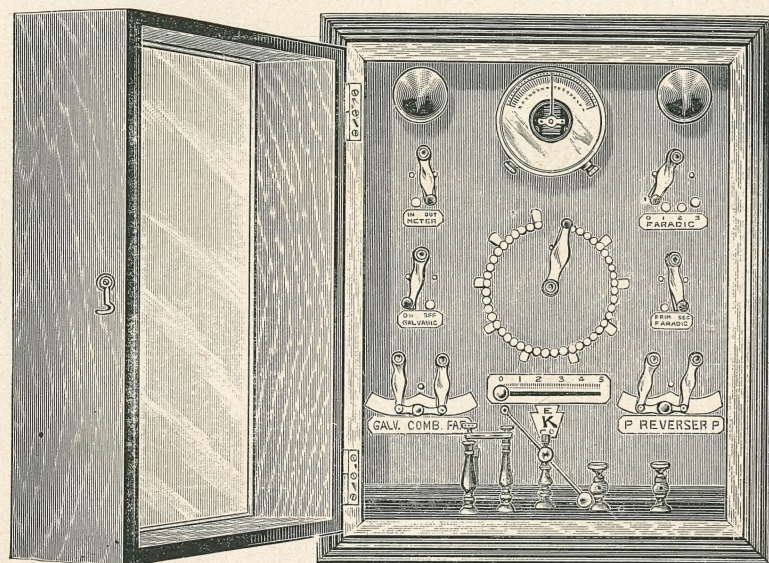
This method insures absolute immunity from danger of shocks from the 500 volt current, there being no metallic connection between the wall plate and the street current.

We have, however, devised a special rheostat which actually reduces the 500 volt to a 110 volt current. The use of this rheostat insures the same service precisely as would be obtained from the 110 volt current, and the danger from accidental shock is reduced to a minimum.

Price, complete for 110 volt direct current	\$ 75 00
" " " " 220 volt current	90 00
" " " " 500 volt current	100 00

Keystone Electro-Therapeutic Wall Plate No. 5

For Use With 110 Volt Direct Current



THE above illustration is one of many styles of wall plates which we manufacture.

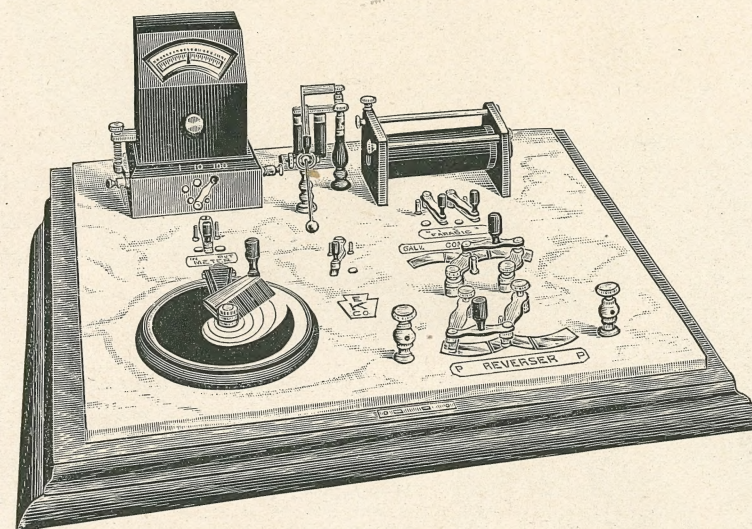
This very desirable office outfit consists of a plate of highly polished marble 18 in. by 22 in. upon which is mounted a faradic coil provided with a switch to select six different strengths of currents. It has a slow and rapid interrupter, a graduated shunt controller for the galvanic current, a pole changer, a De Watteville switch for the combined application of Galvanic and Faradic Currents, a switch for selecting either primary or secondary faradic currents, a switch for the milliamperemeter, a switch to cut off all current, and the latest improved type of milliamperemeter with shunt. All parts are either nickel-plated or finished in brass as may be desired; the containing case is either of Oak or Mahogany as desired.

This wall plate is without exception the finest galvanic and faradic wall plate made.

Price, complete with one pair conducting cords and one pair sponge

Electrodes \$85 00

Keystone Electro-Therapeutic Table Plate No. 6



THE above cut illustrates one of our many types of battery table plates. It consists of a highly polished marble slab, 17 in. by 20 in., upon which is mounted a high tension faradic coil, with slow and rapid interrupters, a De Watteville current combiner, a pole changer, a graphite current controller, a high grade milliamperemeter, a switch for introducing the meter into the patient's circuit, a switch for operating the faradic coil, two switches for selecting either the primary, secondary or high tension faradic currents or all combined.

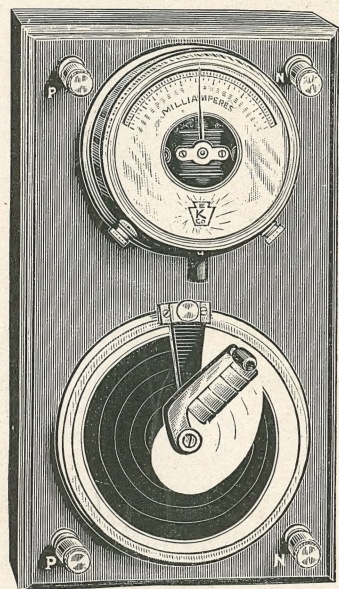
This plate has a polished wood cover with glass top and provided with lock and key.

We supply 42 high-grade Eastern dry batteries with this outfit, which can be placed in the cellar or in a closet. Four wires only are required from the battery to the table plate and can be connected by anyone without the least experience.

Price complete, with one pair sponge electrodes and one pair silk conducting cords \$ 85 00

We will furnish this table plate mounted in a floor cabinet finished in golden oak, with electrode drawers and suitable compartments for the battery cells, complete and ready for use, for 105 00

Keystone Galvanic Switch Board No. 7



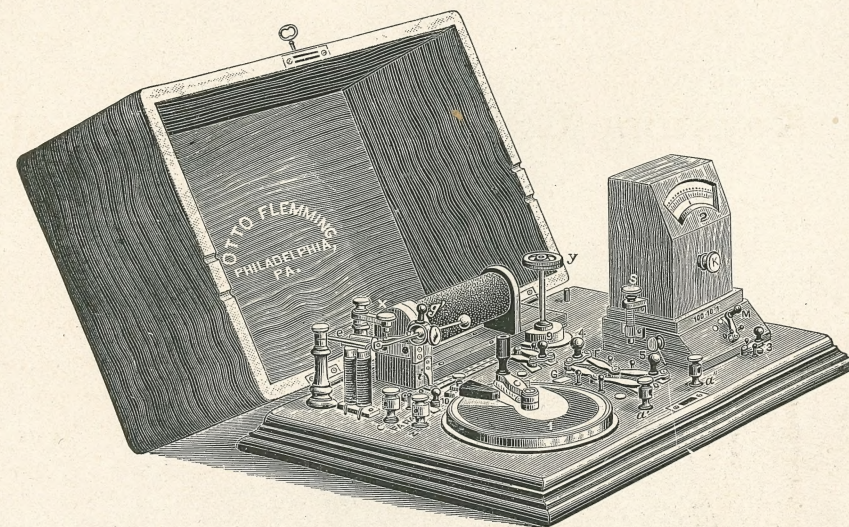
WE are manufacturing this type of apparatus to meet the demands for a small battery switch board, which will take up very little space and which can be used as either a wall or table plate.

The switch board illustrated above consists of a highly polished oak or mahogany base 8 in. by 16 in. on which is mounted an improved Milliampere meter with shunt, Massey graphite rheostat and the necessary binding posts.

This switch board can be used on the 110 volt direct current, by placing a 16 C. P. lamp in series.

Price as above, including cords, handles and sponge electrodes	\$25 00
Price, Vetter Series top and six feet of cord	1 25
Price, with 40 Eastern No. 3 dry batteries, complete	35 00

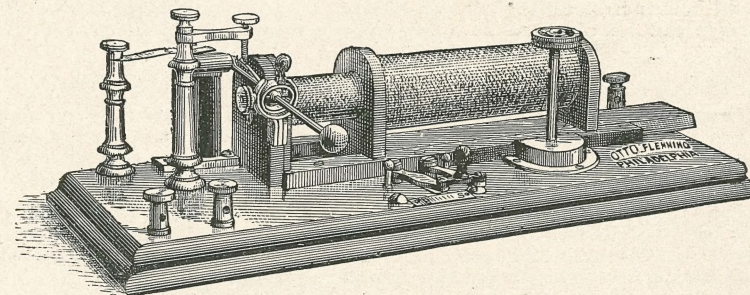
Flemming Table Plate No. 8 For Battery Current



THIS table plate consists of a handsomely polished walnut base with lock cover. Upon the base is mounted a Fleming milliampere meter, Massey graphite rheostat, Du Boise Reymond faradic coil with slow and rapid interrupter, current combiner, pole changer, and all necessary switches required to complete the apparatus.

Price complete, with silk covered coils and sponge electrodes	\$ 85 00
With high tension coils	100 00
Dry batteries to operate same, each	25

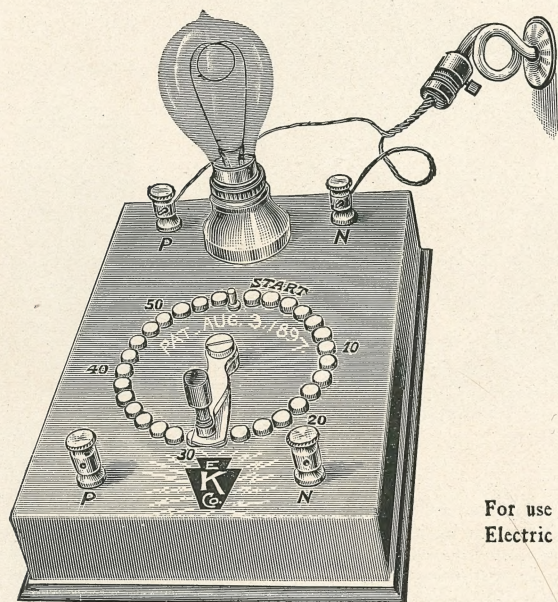
Du Boise Reymond Faradic Coil



This apparatus is neat in appearance, compact, efficient and easy to manipulate, it has a slow and rapid interrupter and gives a primary or secondary current at will. Both currents are governed by a rack and pinion movement. It is mounted on a handsomely polished walnut base and all metal parts are heavily nickel-plated. It is an ideal table faradic coil.

Price complete, with cords and sponge electrodes	30 00
With high tension coil	40 00

Galvanic and Lamp Controller No. 1



For use on 110 Volt
Electric Light Current

THE physician having the 110 Volt direct Electric Light Current in the office, will find this Controller one of the handiest and most economical methods of securing the Galvanic Current.

The apparatus is equipped with the Keystone Improved Controller divided into 40 steps, and will give from 1 to 500 Milli-Amperes on any step on the scale without increasing the voltage, a point of great importance, as the full amperage can be obtained at a low voltage, thus avoiding all pain to the patient.

This feature is possessed by no other make of Controller on the market.

Those having used and understanding thoroughly the fluid Galvanic Batteries as to voltage and amperage, will find this Controller to give exactly the same results; therefore not requiring any change in administering the doses, other than the saving of time and annoyance in handling the wet batteries.

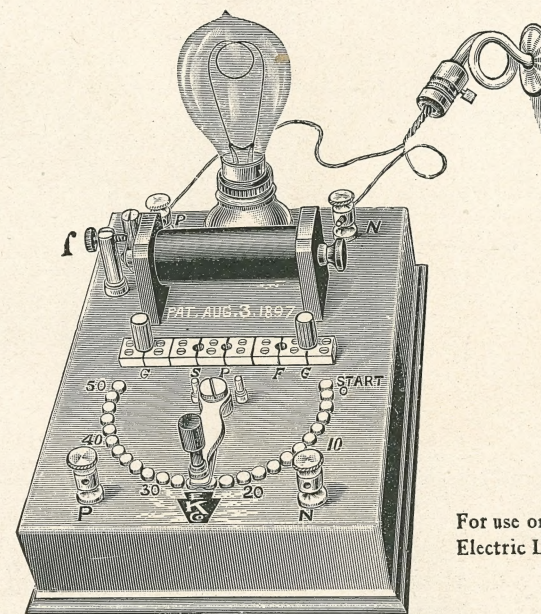
The Controller can also be used for Diagnostic, Urethroscopic and Cystoscopic Lamps of different voltages. It is mounted on a highly polished base in either (Oak, Walnut or Mahogany), all exposed metal parts are heavily nickel-plated making a very handsome and durable apparatus.

The special points claimed for these Controllers are the

Convenience and	Constancy and
Readiness of Action	Uniformity of Current
and Absolutely safe from any Shock to Patient.	

KEYSTONE GALVANIC AND LAMP CONTROLLER with cord, connecting plug and Electrodes, **\$15.00**

Compound Galvanic Faradic and Lamp Controller No. 2



For use on 110 Volt
Electric Light Current

THIS Controller when used on the 110 Volt direct Electric Light Current will make one of the most complete instruments for Galvanism, Faradism, and Diagnostic Lamps, and can be used with better results than with any of the finest Galvanic or Faradic Batteries at one-quarter of the expense, not saying anything about the trouble and labor saved in its convenience and promptness for use over the old style fluid batteries.

Has all the features and advantages of the Galvanic Controller with the addition of a Faradic Coil.

The Faradic Coil is so adjusted that a very mild Primary up to a very strong Secondary current may be obtained by the withdrawal of the regulating tube without any shock to the patient.

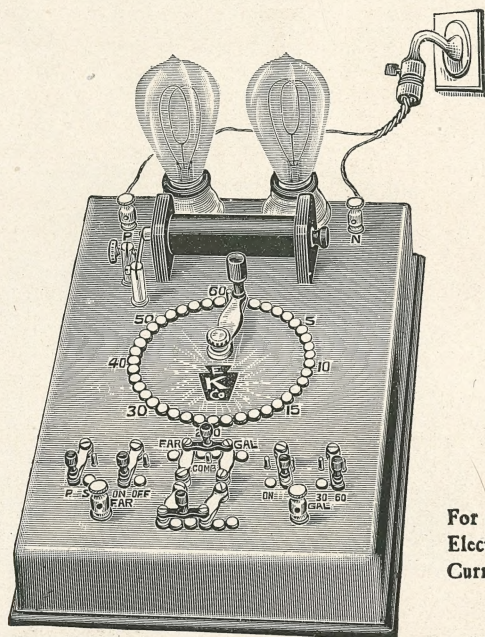
The Compound Controller will be found perfectly safe when using, and so marked that it will be impossible for any one to become confused as to its working, as it simply requires the changing of Plugs to obtain the various currents.

It can be mounted on either Oak, Walnut or Mahogany base highly polished, with hard rubber mountings on Faradic Coil. All metal parts heavily nickel-plated, and requiring very small space.

The results which have been obtained, its durability and beautiful appearance has made a great demand for this Controller.

KEYSTONE COMPOUND GALVANIC, FARADIC AND LAMP CONTROLLER complete with Electrodes, **\$25.00**

Improved Galvanic Faradic and Lamp Controller No. 3



For use on 110 Volt
Electric Light
Current

OUR improved Controller when used on 110 Volt direct Electric Light Current, differs in many respects from our No. 2 Controller.

The advantages derived from this Controller over our No. 2 Controller are, that you are able to obtain the combined Galvanic and Faradic Currents, or each current separate.

When a very mild Galvanic Current is desired for Eye work, etc., we have the Galvanic Controller so arranged that the reading of the large dial or switch will be reduced to one-half of its correct reading, by turning the small switch to the right of case, on contact marked "30." For example if the large switch was turned on contact marked "10" you would receive one-half of the current, or five volts, giving you a very mild current on a long range.

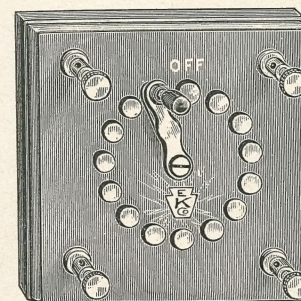
It also has a polarity changer, and all currents are regulated by switches instead of contact pins, so you can readily see the many advantages this Controller has over our No. 2 Controller.

Keystone Improved Galvanic, Faradic and Lamp Controller No. 3,
with Cords, Connecting Plug and Electrodes, . . . \$35.00

Keystone Improved Galvanic, Faradic and Lamp Controller No. 4 same as
above with the addition of a Slow Interrupter . . . 40 00

Keystone Improved Diagnostic Lamp Controller

For 110 Volt Current



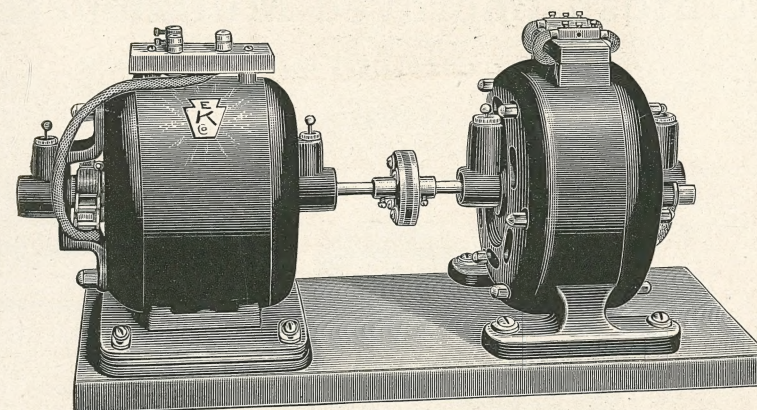
THIS controller is mounted on a polished mahogany base, having 15 buttons and regulating switch. Each button gives an increase of one-half volt and can be used with perfect safety for operating all kinds of diagnostic lamps.

With this controller we furnish a series Vetter current top and six feet of conducting cord.

Price complete . . . \$6 50

Keystone Motor Dynamo

For Converting the Alternating Current into
Constant Current

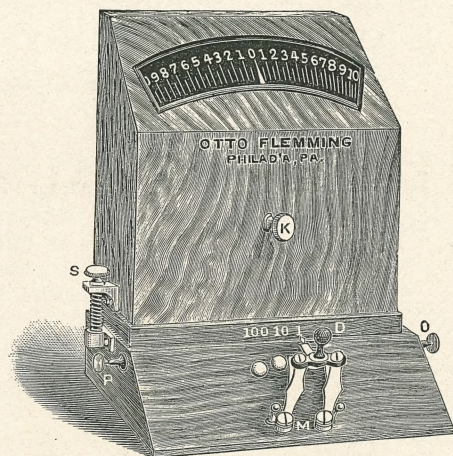


This Motor-Dynamo consists of a motor operated by the alternating current and a dynamo which generates a constant current of any desired voltage.

By the employment of this device any of our apparatus which is used on the 110 volt current described in this catalogue can be operated from an alternating electric light current. In ordering, state the voltage and alternations of the current to which the Motor Dynamo is to be attached.

Price, complete as shown above . . . \$100 00

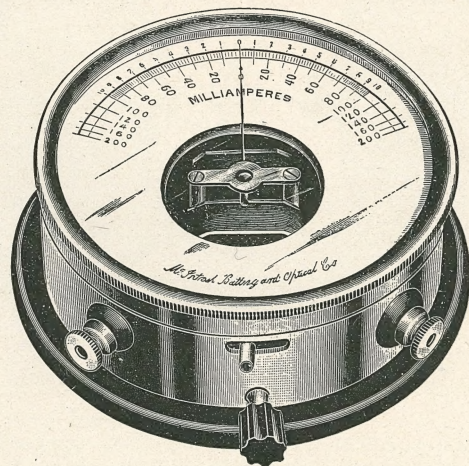
Flemming Milliampere Meter



N modern application of galvanic currents therapeutically and especially in Electro-Gynecology, the dosage of amount of current passing through the patient by measurement, has become just as indispensable to the Electro-Therapeutist, as scales and weights to the Pharmacist. Fleming's Milliampere Meter stands high in reputation as being one of the best, most accurate, durable and simple of manipulation, and has frequently been alluded to in the writings of high authority.

Price \$25 00

McIntosh Improved Milliampere Meter

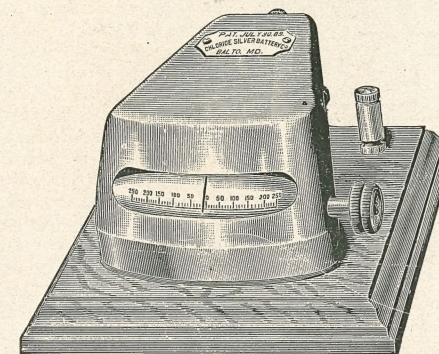


Carpenter-Deprez Type With Shunt

Scale in Black 0 to 400. Scale in Red 0 to 20.

Diameter $5\frac{1}{4}$ inches, Price \$12 00

Milliampere Meter



THE above cut illustrates a newly perfected direct reading Milliampere Meter, encased in a non-magnetic metal case, mounted on a finely finished Mahogany base.

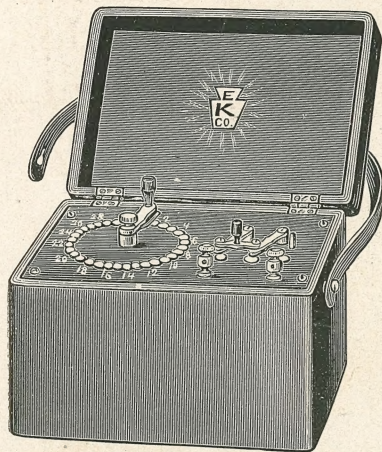
Those using Galvanic Currents will readily see the advantage of using a Milliampere Meter, being able to measure the current accurately, that its administration therapeutically, may be made in proper and exact doses, therefore being able to keep a correct record of the amount of current used on different patients.

This Meter is provided with three scales, one for current ranging from zero to ten milliamperes, the second for current ranging from zero to fifty milliamperes, and the third for current ranging from zero to two-hundred and fifty milliamperes.

Milliampere Meter, direct reading, with full directions as to connecting and its workings, \$20.00

We are also prepared to furnish you with Milliampere Meters of any other make.

Keystone Portable Galvanic Battery



IN placing our Portable Dry Cell Batteries upon the market, we claim that a wonderful advance has been made in electrical apparatus for therapeutic use. No form of instrument heretofore offered begins to fill the requirements so thoroughly as this form of battery does. It meets the theoretical and practical requirements of a galvanic battery of moderate power and constancy for medical use better than any other yet devised for portable use.

The only form of portable galvanic battery heretofore placed upon the market which has met the requirements for all ordinary electrolytic work has been the zinc carbon acid fluid batteries, but the necessity of frequent renewal of battery fluid and elements and the annoyance and damage caused

by leakage have created a demand for a reliable dry cell battery to take the place of the antiquated fluid battery. Many forms of dry cells have been devised for this purpose, among which the chloride of silver cell has most commonly been adopted, but practical experience has proven them to be lacking in some of the most essential features necessary for maximum operations. One principal objection is the low volume of current or amperage generated, which rarely exceeds 300 milliamperes on short circuit, and when used with resistance in circuit does not produce sufficient volume for the treatment of fibroid, or other treatments requiring a large volume of current; they are also found to be subject to local action when not in use, which slowly destroys the strength of the cell.

Recently, however, the demand for a dry cell for commercial purposes, such as for electric bells, telephones, annunciators, etc., has caused considerable experimenting in this direction until at the present date the salomonic dry cell has proven to be under its improved construction the most efficient in generating capacity, durability and lasting quality of anything ever heretofore produced, fluid acid battery not excepted, for the following reasons:

It is free from all danger of destroying or injuring clothing or other fabrics.

It is always ready for use without any special preparations.

Cheaper to operate. Constant in action, and is so improved in its construction that there will be no deterioration whatever, when the battery is not in operation and when used for the purpose intended, generally last from one to two years and, when exhausted, new cells may be replaced with much less expense than the cost of renewal of a chloride of silver battery and at even less expense than the cost of acid solution necessary to operate the old style zinc carbon battery for the same length of time.

We mount these batteries in a handsomely polished mahogany carrying case, with highly polished platform upon which are mounted the selector switch, pole changer and binding posts; all metal parts are heavily nickel-plated and lacquered; with each battery we furnish one pair silk cords and two sponge electrodes.

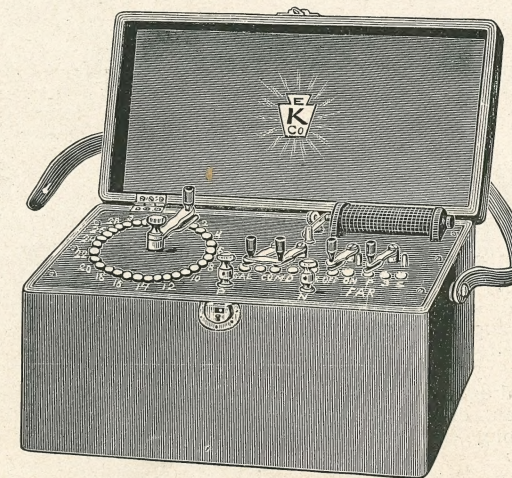
Price, 12 cell without pole changer	\$13 50
" 16 " " " "	17 00
" 20 " with " " "	20 00
" 24 " " " " "	22 50
" 30 " " " " "	25 00

Keystone Portable Combined Galvanic and Faradic Batteries

THIS cut illustrates one of our improved combined batteries. The galvanic portion of this battery is dissimilar to the outfit illustrated on previous page, and in addition to this it is equipped with our high grade Faradic Coil, from which can be obtained a selection of one primary or two secondary currents or all combined. It also has a DeWatteville current combiner by which the operator is enabled to select either the Galvanic, Faradic, or Galvanic and Faradic currents combined.

This battery is beyond doubt the most modern, best constructed as well as the lowest priced battery on the market.

Price, 16 cell with sponge electrodes and cords,	\$25 00
" 20 " " " " " "	28 00
" 24 " " " " " "	30 00
" 30 " " " " " "	33 00



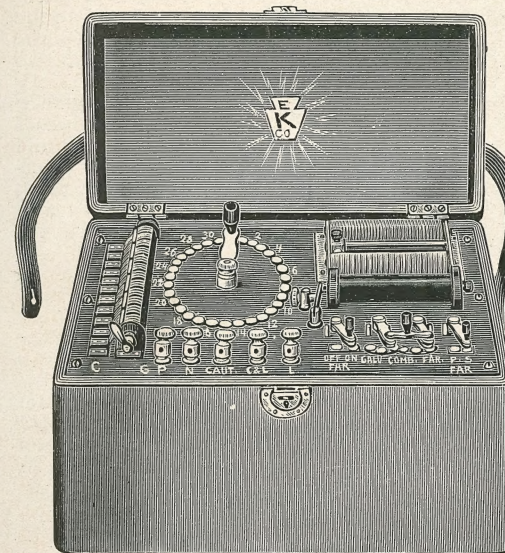
Keystone Galvanic, Faradic, Cautery and Diagnostic Lamp Battery

This cut illustrates the only practical, as well as portable Galvanic, Faradic, Cautery and Diagnostic Lamp Battery manufactured in

the world, it has all the features of our combined battery above described together with the addition of a cautery rheostat, a diagnostic lamp rheostat and a specially constructed commutator by which the cell can be coupled in either series or parallel, which feature is possessed by no other battery manufactured.

In all instances this is a great convenience; no more complete apparatus of this kind has been offered to physicians, and we can say that it is without equal, as the battery has stood the most severe tests.

We only manufacture this battery in two sizes, namely, twenty-four and thirty cells.



Price, including sponge electrodes and cords, 24 cell,	\$40 00
" 30 " " " " " "	43 00

with interrupter - a mill. drop in \$54.
29.00
Cable can

12.
14.
16.

Chloride of Silver Dry Cell Galvanic Batteries

WHERE a small amount of current is required for the treatment of Eye, Electrolysis of small growths, or the removal of superfluous hair, you will find this battery sufficient to meet all requirements for light Galvanic currents. The cells are arranged in series so that any desired number may be used.

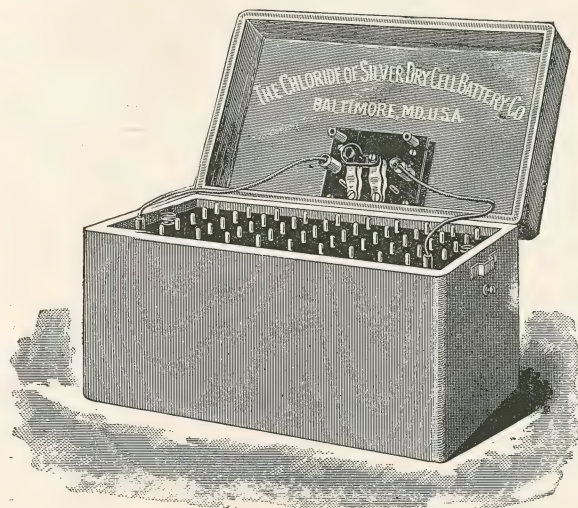
The case is of highly polished mahogany, containing one pair each of conducting cords and sponge electrodes.



Galvanic Battery No. 3.

	Compactness	Portability	Price
6-cell	4 3/8 x 4 1/2 x 5 1/2 inch	2 1/4 lbs.	\$10.00
12-cell	5 3/4 x 5 1/2 x 5 1/2 inch	3 1/2 lbs.	15.00
16-cell	6 3/8 x 5 3/8 x 5 1/2 inch	4 lbs.	20.00

Galvanic Battery No. 1.



This battery containing a larger number of cells than the No. 3 battery is provided with a water Rheostat to regulate the strength of the current. Also two short selecting cords for connecting any number of cells required and a switch for closing and opening the circuit, as well as changing the polarity.

Being able to select any strength from one cell to the full capacity of the battery enables a Physician to use this battery for

delicate work as well as for heavy Galvanic currents for general treatments. These batteries have a capacity of over 700 working hours, and when not in use there is absolutely no waste of the elements. This battery contains a regular line of electrodes in a strong and durable tray, fitted within the top of case.

	Compactness	Portability	Price
24 cell	10 1/8 x 5 3/4 x 7 1/4 in.	8 lbs.	\$27.00
32-cell	10 1/8 x 5 3/4 x 7 1/4 in.	8 3/4 lbs	35.00
50-cell	11 1/8 x 6 1/4 x 7 1/4 in.	12 lbs	50.00
60-cell	13 x 6 1/4 x 7 3/8 in.	14 lbs.	60.00
84-cell	11 1/4 x 11 1/4 x 7 1/2 in.	19 1/2 lbs.	82.00

Restoring exhausted Galvanic cells, for any of above batteries, 30 cents each

Chloride of Silver Dry Cell Combination Galvanic and Faradic Battery



Combination Galvanic and Faradic Battery No. 13.

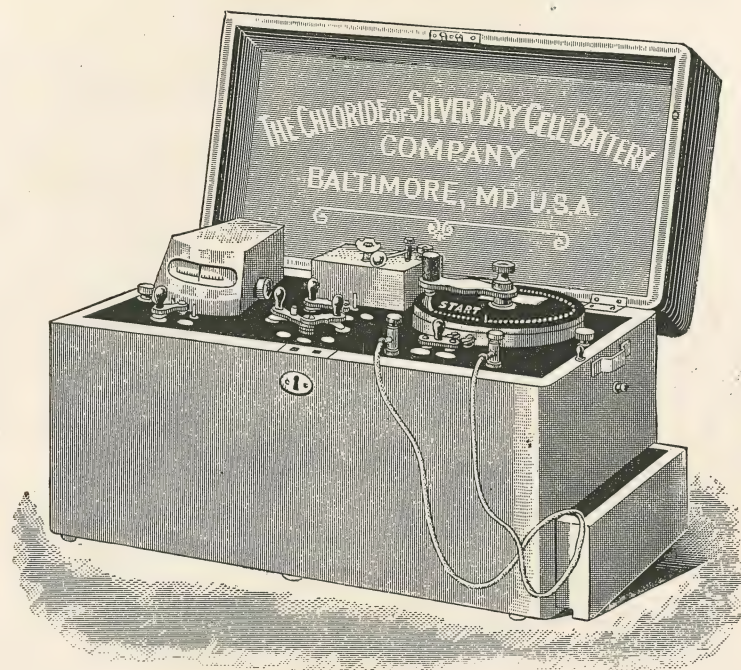
FOR a complete combined Galvanic and Faradic battery, nothing equals the above battery. It is equipped with 50 Chloride of Silver Galvanic Interchangeable Dry Cells, 4 Chloride of Silver Faradic Interchangeable Dry Cells, Superior high tension coils, containing a primary and four secondaries of different sizes and lengths of wire, Automatic Rheotome, ranging from six to nine hundred interruptions per minute, and it can be used for both the Galvanic and Faradic Currents. It has a Cell Selector for both the Galvanic and Faradic Currents and a three scale direct reading Milliampere Meter, measuring the Galvanic Current. A switch for combining the Galvanic and Faradic Currents, so that the two currents may be applied together and at the same time. A Current Reverser for changing the polarity, and all necessary switches required to obtain the various currents.

The case is of Mahogany, highly polished, containing a drawer in the lower portion for the electrodes, same as those in the preceeding batteries of this make.

Combination Galvanic and Faradic Battery No. 13,	\$115.00
Restoring exhausted Galvanic Cells,	30 cents each
Restoring exhausted Faradic Cells,	75 cents each

Compactness, 21 x 10 1/2 x 9 1/4 in. Weight 33 lbs.

Chloride of Silver Dry Cell Galvanic Battery



Galvanic Battery No. 16.

THIS battery contains a Current Controller, Milliampere Meter, and Automatic Rheotome, making a most complete Galvanic Battery in every respect. It also has a Cell Selector, being able to use a few cells at a time, where a light current is required, or to increase it to the full capacity of the battery, in each instance being able to regulate the current by the Current Controller. It also has a Pole Changer, and a three scale Milliampere Meter with switch for placing this instrument either in or out of circuit.

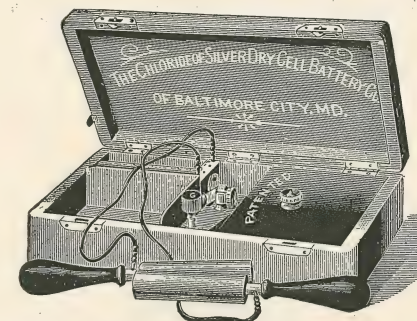
This battery is mounted in a Mahogany case with drawer in bottom of case, containing the regular set of electrodes.

	Compactness	Portability	Price
25 cell	18 x 9½ x 10⅜ in.	20¼ lbs.	\$73.00
35 cell	18 x 9½ x 10⅜ in.	21½ lbs.	82.00
50 cell	18 x 9½ x 10⅜ in.	23 lbs.	95.00

Galvanic Battery No. 11, same as No. 16, but without Automatic Rheotome, deduct the cost of latter, viz: . . . \$10.00

Galvanic Battery No. 10, same as No. 16, but without Automatic Rheotome and Meter, deduct the cost of latter, viz: . . . \$30.00

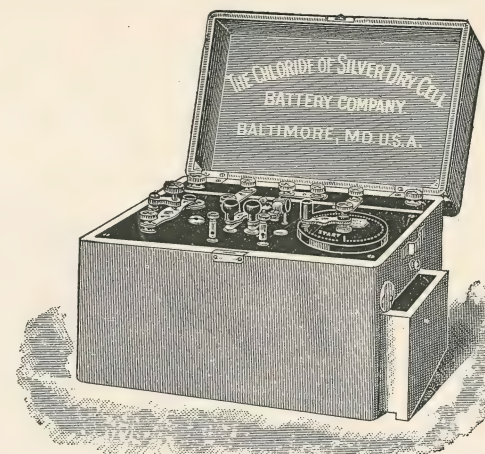
Chloride of Silver Dry Cell Faradic Battery



Pocket Faradic Battery No. 7.

THE Pocket Faradic Battery No. 7, being small in compactness, and mounted in a handsomely finished mahogany case, with an induction coil, giving three currents, primary, secondary and combined, is used among Physicians, and recommended by them to patients for home use, it being very easily manipulated, as it simply requires the insertion of the contact key in the socket for immediate use. The battery is furnished with cords, handles, nickel plated electrodes, and flannel covered carbon electrodes, and will yield one hundred hours of actual work.

Pocket Faradic Battery No. 7, two cells. \$10.00
Restoring exhausted cells, 75 cents each
For return by mail add 13 cents postage.

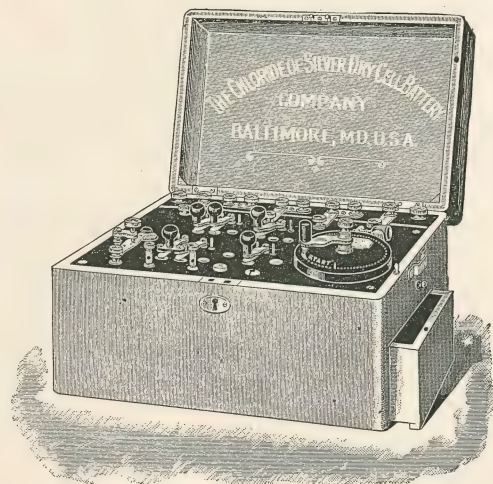


Upright Faradic Battery No. 6.

Upright Faradic Battery No. 6 gives the same currents as battery No. 7, but is furnished in upright form, having a circular current Controller, which enables one to obtain a longer range of current, so mildly as to be scarcely perceptible, and can be increased so gradually without interruption to the patient. It is also operated by switches and does not require the changing of the cords, which is an improvement over the No. 7 battery. It also has a drawer in the lower part of case for the electrodes.

Upright Faradic Battery No. 6, two cells, with Current Controller, . . . \$15.00
Restoring exhausted cells, 75 cents each
Full directions accompany each battery.

Chloride of Silver Dry Cell Faradic Battery



Faradic Battery No. 14.

THOSE desiring a Faradic Battery of high grade, will find this battery to contain many excellent qualities, as it is designed to meet the wants of busy practitioners. It has three coils, a primary and two secondaries, each being wound with a different size of wire. The primary with No. 26 wire, the first secondary with No. 22 wire, the second secondary with No. 32 wire, each possessing an entirely different therapeutic value. The primary and secondaries may be used independently or in combination, placing five distinct currents at the command of the operator. It has a cell selecting switch, by which two, three or four cells may be used as required; also a Current Reverser and a Contact Breaker for diagnostic purposes.

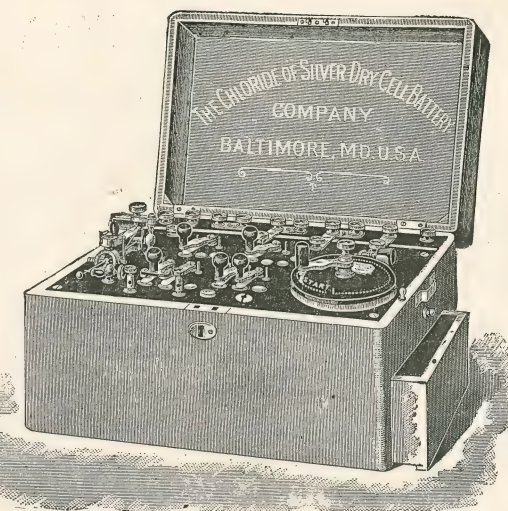
This battery, although containing a number of switches, is not at all complicated and is very easily understood by following directions.

The case is of Mahogany, highly polished, provided with a lock, and in the lower portion is a compartment or drawer containing one pair of silk conducting cords, one ebonized plain handle, one ebonized interrupting handle, and one pair of sponge electrodes.

Faradic Battery No. 14, four cells, with Current Controller, . . . \$20.00
Restoring exhausted cells, . . . 75 cents each

Chloride of Silver Dry Cell Faradic Batteries

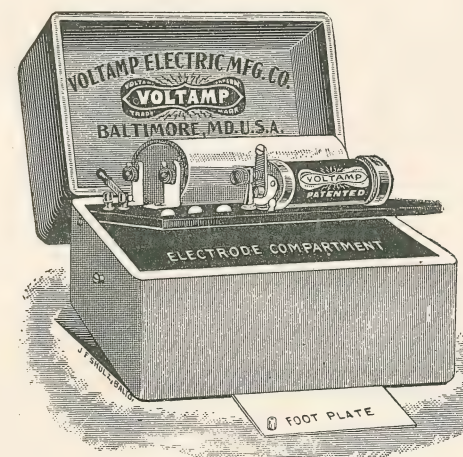
THE Faradic Battery No. 8 is a complete type of Faradic Battery, containing in compact and portable form all appliances needed by a Physician or Specialist. It has sufficient Chloride of Silver Interchangeable Dry Cells for Faradic work, and contains a Current Controller, so that it may be applied with safety to the most delicate portion of the body. It has a Rapid and Automatic Slow Interrupter of the most improved pattern; also coils containing a primary and four secondaries, so arranged that the primary and secondaries may be used independently or in combination, which gives the operator nine distinct currents. It also has a Current Reverser for changing the polarity, and a Current Breaker for diagnostic work, as well as a switch for selecting either two, three, or four cells in the circuit. The case is of Mahogany, with lock, and contains silk covered cords, handles, interrupting handle and sponges.



Faradic Battery No. 8.

Faradic Battery No. 8, four cells, with Current Controller, . . . \$35.00
Restoring exhausted cells, . . . 75 cents each

Voltamp Faradic Battery No. 4.



Voltamp Battery No. 4.

Physicians desiring to recommend a Faradic Battery to patients will find this battery to meet most all requirements, it being well constructed and far equals all other Faradic batteries of its kind on the market for the price. It has three currents, primary, secondary and combined, as well as a complete set of handles, electrodes, etc.

Voltamp Faradic Battery No. 4, . . . \$5.00
Extra dry cells for same, . . . 25 cents each

Full directions accompany each battery.

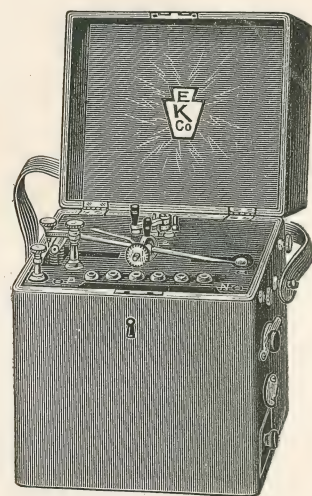
Keystone No. 3 Faradic Battery

With Slow and Rapid Interrupters

THIS is the most complete type of Faradic Battery ever constructed, containing in portable form every appliance that the busy physician or specialist could desire in such an apparatus. Its leading points of superiority are as follows:

Two No. 3 Eastern dry cells with selector switch, giving enough power for any work in which faradization could be used.

Tube modifier, enabling the operator to graduate the current so finely that it may be applied with perfect safety to the most delicate portions of the body, such as the eye, mucous membrane of the throat, vagina, rectum, etc., etc.



Superior coils, containing a primary and four secondaries of different sizes and lengths of wire, so arranged that the primary and secondaries may be used independently or in combination, placing nine distinct currents at the command of the operator. The primary is composed of six layers of No. 18 wire; the first, second and third secondary are composed of 1,500 feet each of No. 32 wire; the fourth secondary is composed of 3,000 feet of No. 36 wire. In addition to the rapid interrupter this battery is supplied with a slow interrupter of

the most approved pattern, permitting any desired number of interruptions to be made.

The platform on which are mounted the selectors, switch and contact posts, is made of polished hard rubber. All parts are heavily nickel-plated. The case is of polished walnut, provided with lock and carrying strap, and contains one pair silk conducting cords and one pair sponge electrodes with polished wood handles.

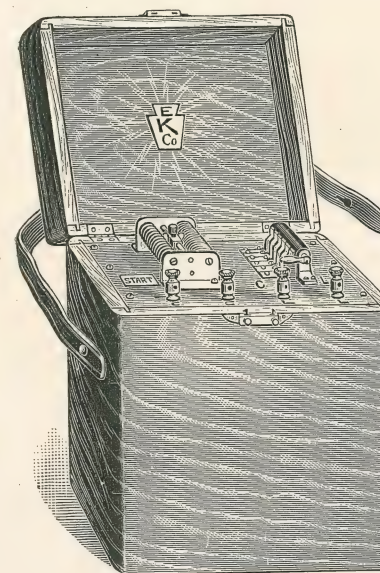
Price, \$20.00

The Celebrated

Keystone Dry Cell Cautery and

Diagnostic Lamp Battery No. 1

THIS outfit is designed for those conditions requiring a light, portable and reliable cautery and diagnostic lamp battery. It consists of nine No. 3 Eastern dry cells fitted into a handsome oak case. The platform forming the top of case is of polished oak, and the regulating rheostats and commutator shown on top are durable, tasteful and handsomely finished.

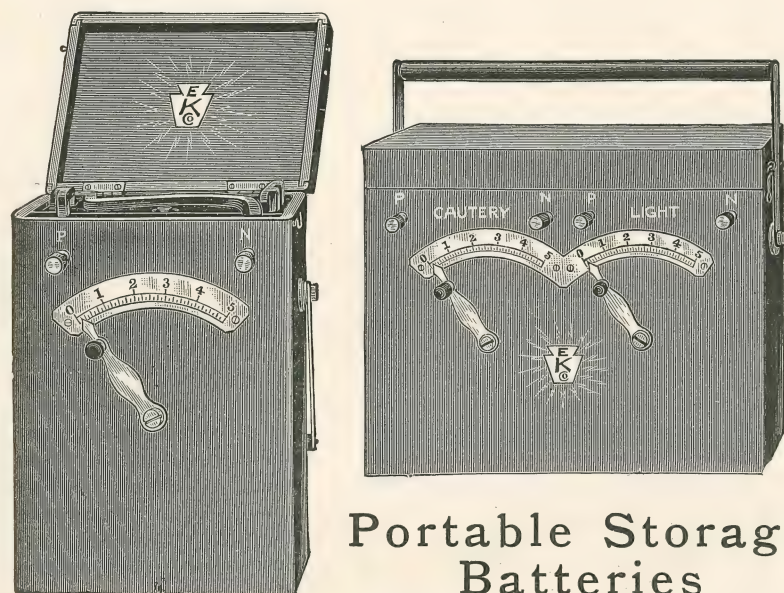


The rheostat lever passes over a continuous resistance wire, varying from 0 to 1 ohm and gives a regulation of current to the cautery electrode variable from 3 to 30 amperes, and is capable of doing all operations where ordinary size electrodes are used. A very fine wire is used on the lamp rheostat which will vary the current from 3 volts to 12 volts, thus enabling the operator to use any size lamp made and have same under perfect control. The commutator is used to connect the cells in either series or parallel, as may be desired. When using the cautery knife the commutator is turned so that the cells are three in series and three parallel, which insures very high amperage and long life. When using diagnostic lamp the commutator is turned so that the operator is enabled to use from 0

to 4 volts, or from 0 to 12 volts, a feature possessed by no other battery in the world. Two sets of binding posts are used, one set for cautery and one set for diagnostic lamp. The rheostat, binding posts and commutator are all so plainly marked that a child could operate it if necessary. This battery has been placed to many severe tests and in every case it has more than fulfilled our expectations. The size of containing case is 10 x 10 x 11.

Price, only \$15.00 Net

Or, we will furnish the above battery with the following electrodes: 1 Keystone cautery handle, 1 pair cautery cords, 3 cautery knives and 1 diagnostic throat lamp with shield, for the sum of \$25.00 net.



Portable Storage Batteries

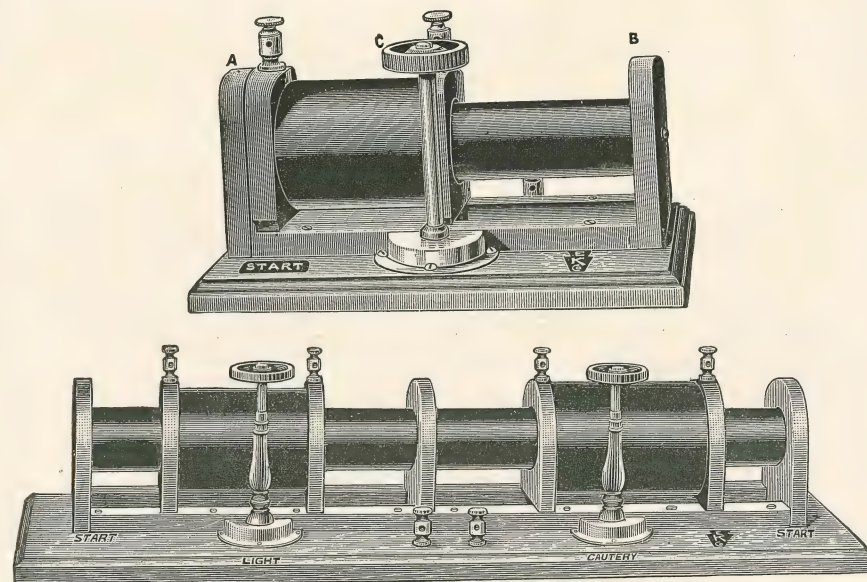
THE above cuts illustrate our improved form of Physicians' and Surgeons' portable Storage Batteries, especially designed for Cautery and Diagnostic lamp work. The cells are of the latest Chloride Accumulator type. Being specially mounted, they far exceed in their working qualities any other type of Storage Battery manufactured.

A special feature claimed for these batteries is the manner in which we have mounted the Rheostat, having overcome a source of continuous annoyance, and which differs from any other style made.

By mounting these Rheostats on heavy insulated material in separate compartments, between the cells and front of case, protects them from all fumes of acid, dust, etc., while a graduated index enables the operator to set the switch at the proper heat desired, acting as a guide while using knife in any concealed cavity, being able to use from a very delicate knife to the largest knife used among specialists and general practitioners.

	Type	Volts	Amp. Hrs.	Weight	Dimensions	
Storage Battery, Light	B ₃	6	6	15 lbs.	6 x 6 x 7 in.	\$22.50
" " "	B ₃	8	6	19 lbs.	6 x 8 x 7 in.	29.00
" " "	C ₃	6	11	20 lbs.	7 x 7 x 9 in.	27.25
" " "	C ₃	8	11	25 lbs.	7 x 9 x 9 in.	32.50
" " Cautery	C ₅	4	22	22 lbs.	7 x 7 x 9 in.	26.50
" " Cautery and Light	C ₅	6	22	33 lbs.	7 x 10 x 9 in.	36.00
" " Cautery	D ₃	4	25	26 lbs.	7½ x 10 x 11½ in.	26.50
" " Cautery and Light	D ₃	6	25	37 lbs.	7½ x 8 x 11½ in.	40.00
" " Cautery	D ₅	4	50	38 lbs.	7½ x 10 x 11½ in.	38.50
" " Cautery and Light	D ₅	6	50	50 lbs.	10 x 10 x 11½ in.	51.00
" " Cautery	D ₅	4	50	39 lbs.	7½ x 10 x 11½ in.	
with ampere meter, for operating Bottini Incisor or Cauteratory,						65.00

Keystone Alternating 52 or 104 Volt Cautery Transformers



THERE are many Physicians located where the Alternating Incandescent Lighting System of 52 or 104 volts, current can be had, and who could use this Transformer to great advantage, doing away with the continuous annoyance of Storage and Cautery Batteries.

The Controller has 2 coils, the Primary and Secondary. The Primary is composed of a number of turns of fine insulated copper wire wound around a core of annealed iron wire.

The Secondary coil is composed of a few turns of thick wire wound on a polished spool movable over the Primary.

The regulation of the current is done by a rack and pinion with an insulated milled thumb screw, when the conducting cords are attached to the binding post on top of the secondary coil, with Cautery Handle and electrode attached. All required to attain the proper heat is to move the secondary coil away from point marked "Start" and the desired heat from a dull cherry red to a brilliant white can be had.

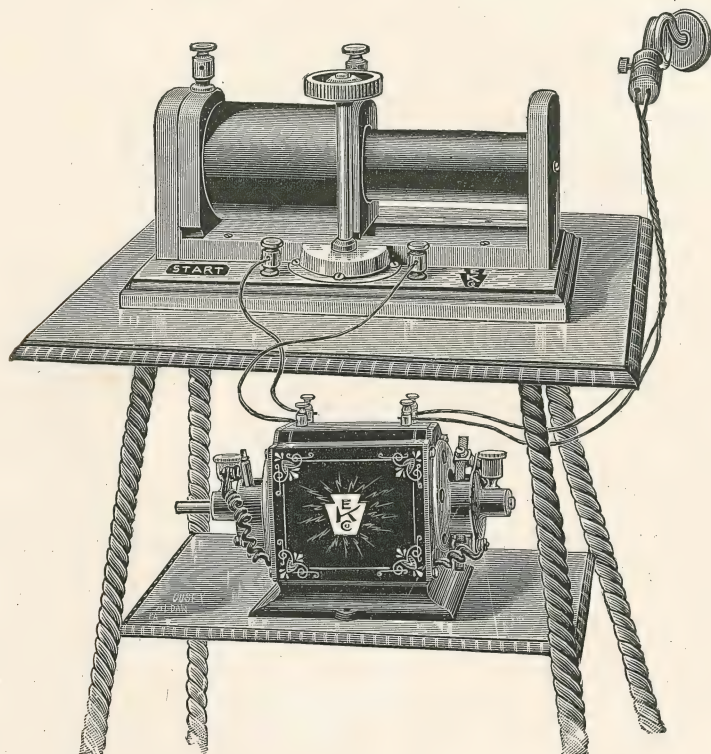
The double Transformer, as illustrated, is so constructed, that it can be used for both Cautery and Diagnostic Lamp work at the same time, regulating the current on each coil as done on the single Transformer.

These Transformers are mounted on either Oak, Walnut or Mahogany bases, highly polished and can be connected to any fixture by removing lamp and inserting the connecting plug.

Keystone Alternating Cautery Transformer No. 1, with cord and attaching plug \$20.00

Keystone Alternating Cautery and Light Transformer No. 2, with cord and attaching plug 25.00

Keystone 110 Volt Direct Cautery Transformer



THE above illustration shows the most improved method of utilizing the 110 Volt direct current for Cautery work.

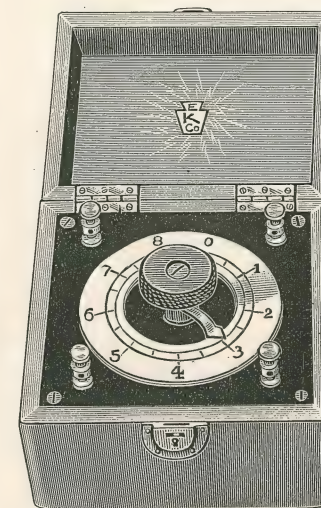
It shows the connections from the ordinary lamp receptacle to our Motor Dynamo (the dynamo being necessary to change the direct current to an alternating current) and from the Motor Dynamo to the Cautery Transformer, from which you obtain the same current as you do from our Alternating Current Transformer.

Those desiring Cautery and Light, can use our double transformer as illustrated on preceding page.

This instrument can be mounted on a shelf or any place most convenient by extending the length of the cords.

Keystone 110 Volt direct Cautery Transformer No. 1 . . .	\$50 00
Keystone 110 Volt direct Cautery and Light Transformer, No. 2 . . .	55 00

No. 3 Keystone Alternating Current Cautery Transformer



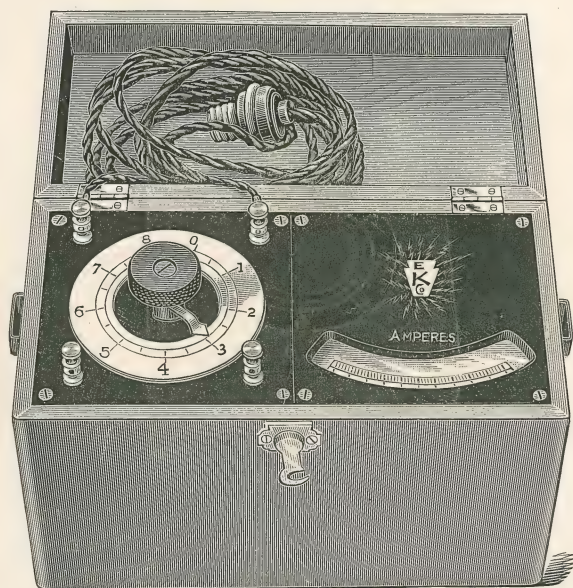
THIS Transformer has been designed to supply the needs of physicians who demand a convenient and portable controller. It is mounted in a polished mahogany carrying case size 7 x 7 x 5 inches high. The platform is of polished hard rubber, upon which is mounted the indicating switch and terminal posts, the heat of the cautery knife is regulated by turning the handle on top of the instrument. The index indicates the amount of the secondary coil exposed to the primary coil. With this adjustment, from the smallest to the largest knives made can be heated with perfect ease. The maximum output of this apparatus is 4 volts and 60 amperes.

Price with attachment cord and plug	\$20 00
No. 4 Transformer, same as above, but with a maximum output of 4 volts and 100 amperes	25 00
No. 5 Transformer, same as the No. 3 with motor-dynamo mounted in same case to be used on the 110 volt direct current	60 00
No. 6 Transformer, same as the No. 4 with motor-dynamo mounted in same case, to be used on the 110 volt direct current	65 00

The No. 5 and No. 6 Transformers can be so arranged with the addition of two selector switches that it is adapted to either the direct or alternating current at will.

Price of this extra attachment	\$5 00
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No. 7 Keystone Alternating Current Cautery Transformer with Ampere Meter



THIS apparatus is the same as the No. 4 transformer with the addition of a high grade ampere meter, which registers from 0 to 100 amperes which feature will readily be seen is of an enormous value to the operator who is compelled to use the Bottini knife or Down's forceps where the platinum knife cannot be seen while in operation, and where it is absolutely necessary that a uniform heat must be maintained under all conditions, which is easily accomplished with this apparatus by the operator observing the amount of current flowing through the meter.

The above apparatus is mounted in a handsomely polished mahogany carrying case, size, 13 x 7 x 7.

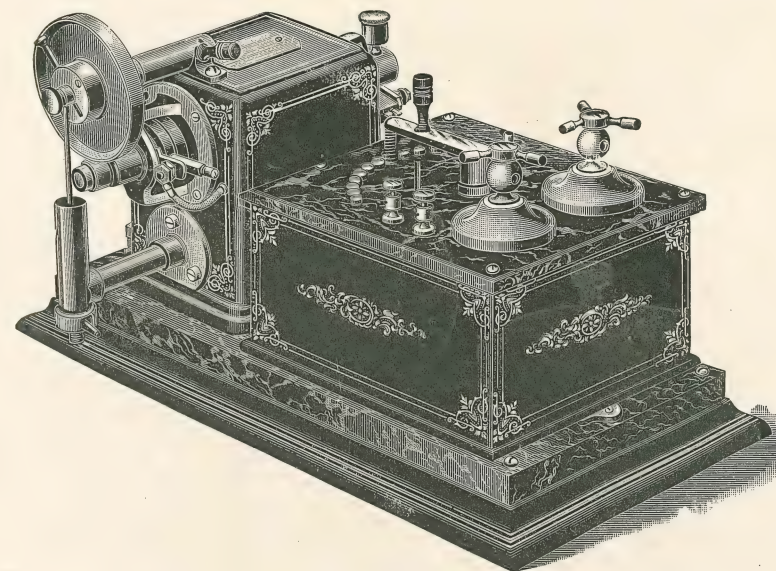
Price with 7 ft. cord and attachment plug \$65 00

No. 8 Keystone Cautery Transformer, same as the No. 7, but motor-dynamo mounted in same case to be used on 110 volt direct currents, price, 105 00

No. 8 Transformer with Pynchon Air Pump

For Aural and Eye Massage

Patented May 19, 1903



Price with pump attached, as shown, for 110 or 220 volt direct current	\$85 00
Price as shown in illustration, wound and fitted for No. 1 massage handle, but not including No. 1 handle	90 00
Price of shunt rheostat for connecting above outfit to 500 volt current	25 00

This apparatus, with the exception of the ear pump, is in every respect the same as the one shown elsewhere in this catalogue.

The changes in the ear pump were made at the suggestion of Dr. Edwin Pynchon, of Chicago.

Instead of being connected directly to the motor shaft, a reducing gear is used so that the pump can be run at a very low speed while the motor is allowed to run at a much higher speed. The points gained by this are absolute steadiness, and the ease with which the pump is thrown in and out of service, which is accomplished by a single movement of the lever shown on top of the motor.

The total length of stroke obtainable is $1\frac{1}{4}$ inches. Any length within this limit can be used as desired. The operator is aided in the adjustment by a graduated scale which is attached to the sliding block.

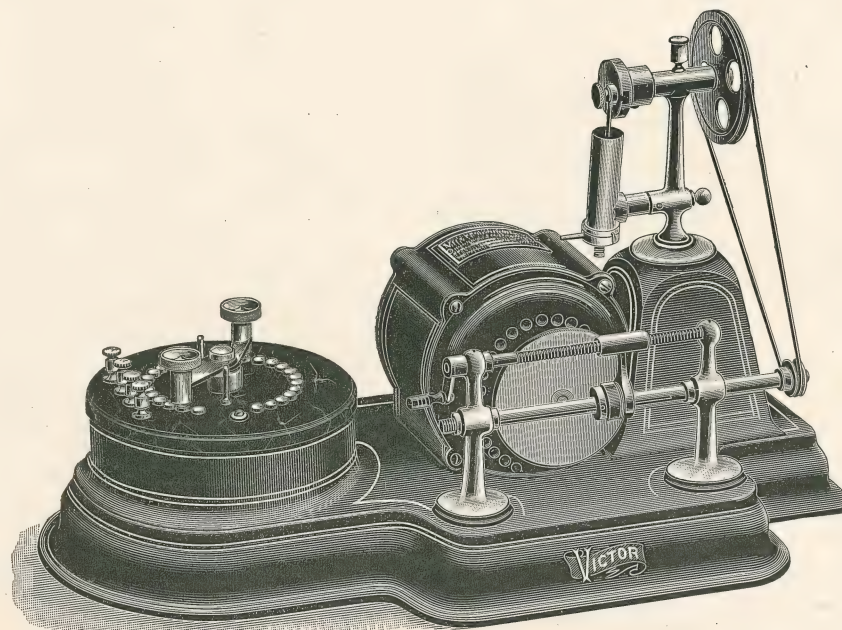
With this pump either suction alone, suction with release, compression alone, or vibration, which is alternate suction and compression, can be obtained. On one end of the motor shaft a fitting is provided to which a cable sheath and hand piece for nasal drill or saw can be attached, or our No. 2 small massage handle.

If it is desired to use the No. 1 handle an extra charge is made and nasal drill can not be attached without a special fitting.

No. 9 Transformer

Combination Instrument for Alternating Current

Patented May 19 and June 30, 1903



Price of outfit as shown with ear pump for 104 to 115 volts, 60 cycle alternating current \$100 00
Additional for 125 to 133 cycle current 10 00

The No. 6 transformer is designed to give precisely the same service when supplied with an alternating current as is obtained from the No. 2 transformer on the direct current.

The ear pump shown is the Pyncheon pump with the difference that its speed in this case is controlled entirely by mechanical means instead of only partially so as is the case in the direct current outfit. Its speed is under such perfect control that any number of strokes can be obtained from 60 to 4,000 per minute and the action is steady and uniform throughout this range.

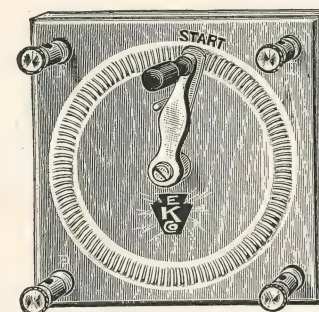
In addition to operating the pump provision is made for attaching cable, sheath and hand piece for nasal drills, saws, trephines, etc., and for attaching the Victor Vibratory Massage Handle, the same speed controller being used as is used for the ear pump.

The transformer for cautery and diagnostic lamps is the same as shown separately elsewhere in this catalogue.

The outfit is mounted on a suitably designed and finished base.

The entire instrument is finished in jet black, nickel and oxidized copper, and no pains has been spared to bring it up to the usual "Victor" standard of excellence as to utility, durability and beauty.

Keystone Storage Battery Controller



THE Keystone Storage Battery Controller can be used by physicians having their Storage Battery placed in the basement in portable form, by running leads through the floor to the Controller, which can be mounted against the wall or any place in the office, and regulating the current for cautery work.

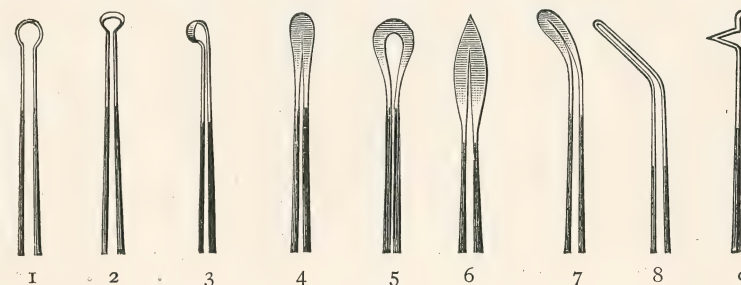
Keystone Storage Battery Controller, for Cautery, \$5.00
Keystone Storage Battery Controller, for Cautery and Diagnostic lamp work, 10.00

Cautery Handle



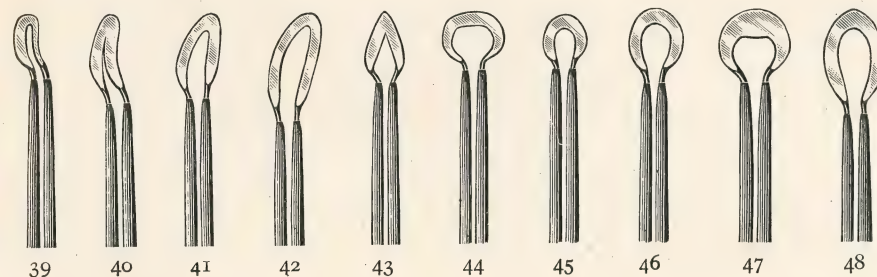
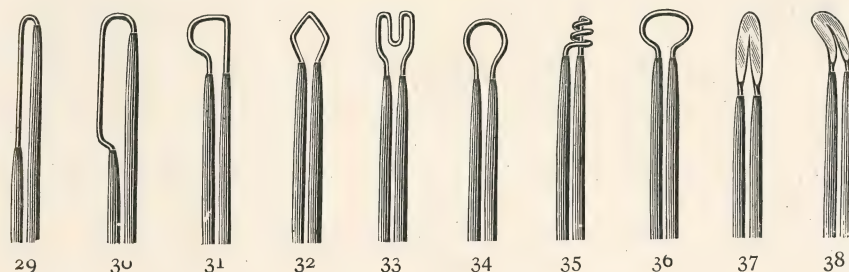
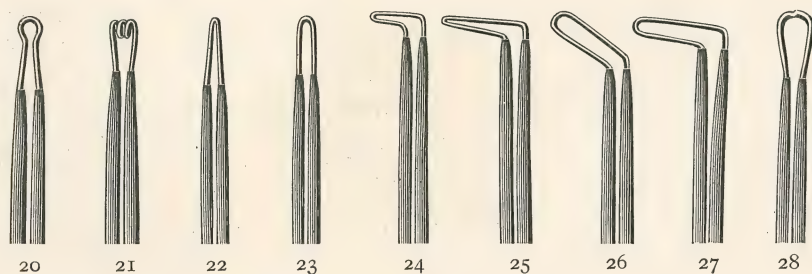
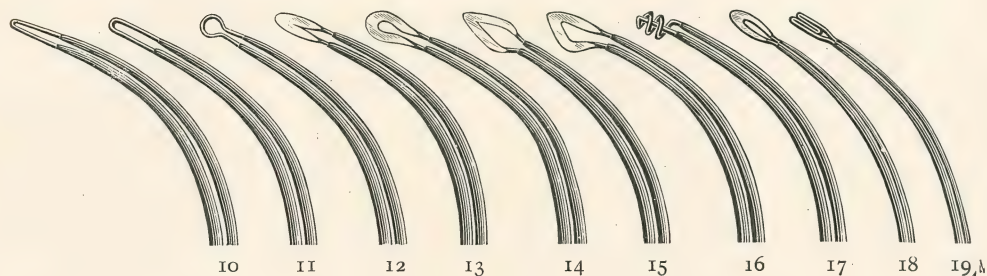
Cautery handle, as illustrated, \$4.25
Cautery cords, from \$1.50 to 1.75
Cautery Handle and Snare Attachment, 8.50

Cautery Electrodes



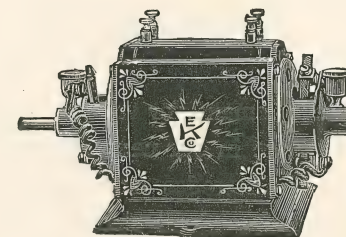
Cautery Electrodes

Continued



Price of electrodes, 1 to 38 \$1 00
 " " " 39 to 48 1 25

The Keystone Motor Generator



WE illustrate herewith a combined Motor and Alternating Current Generator. The function of this Motor Generator is to convert the 110 Volt Direct Electric Light Current into an Alternating Current. Those desiring to use Sinusoidal Current can use this Motor Dynamo by connecting it to any of our Galvanic Controllers, and from this apparatus obtain the Sinusoidal Current, regulating the current the same as for Galvanic work.

It can also be used as a motor for running Static Machines, Surgical Drills, Dental work, or for any work not requiring over one-sixth of a horse-power.

Keystone Motor Generator, one-sixth of a horse-power, \$35.00
Universal Dental Hand Piece, with flexible shaft and sheath to fit any drills, burrs, etc. 20.00

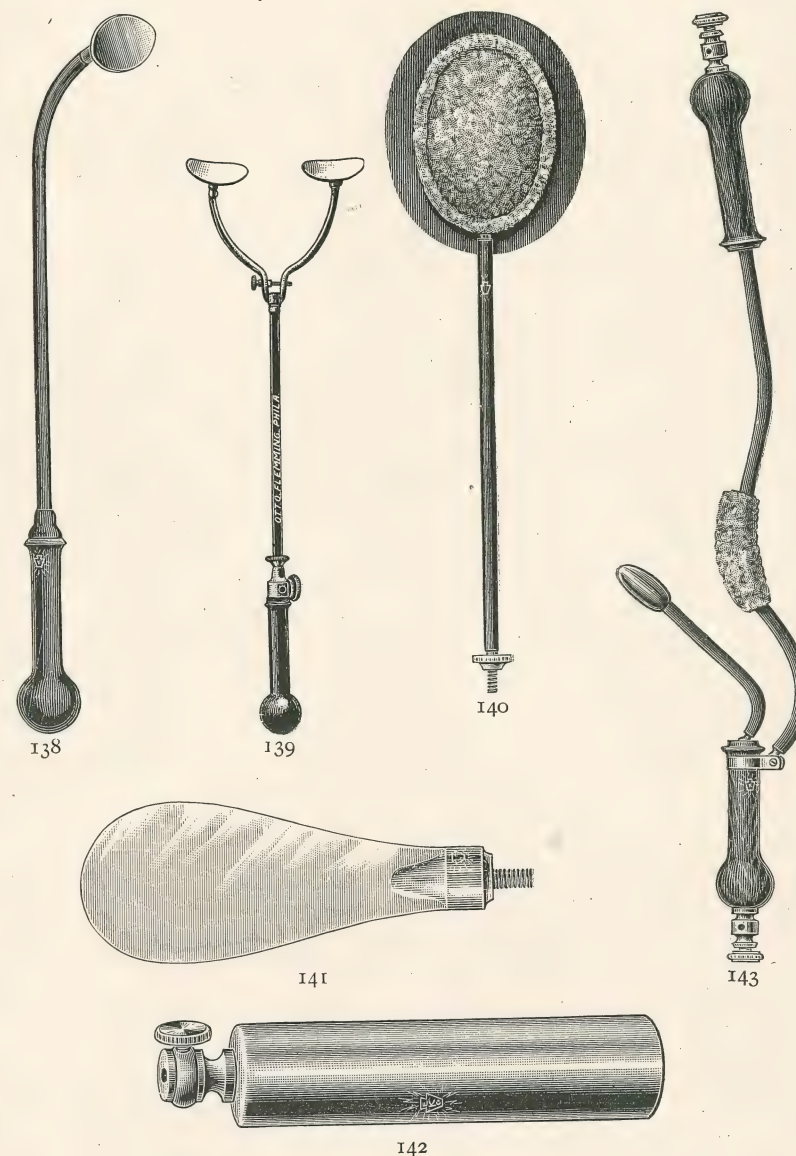
Important

OWING to the great demand for various electrodes of special design, we illustrate in our next few pages, a few of the different styles of electrodes most generally used, but we have a complete line of all electrodes on hand. Should you desire any other style of electrode than we illustrate, or desire any special style of electrode made, by furnishing us with a sketch giving proper dimensions, we would be pleased to supply you with same.

When ordering electrodes do not fail to state what make of battery you wish them for, as it will save delay in communicating with you regarding the appliance for which they are desired.

This article pertains also to ordering cautery electrodes, etc

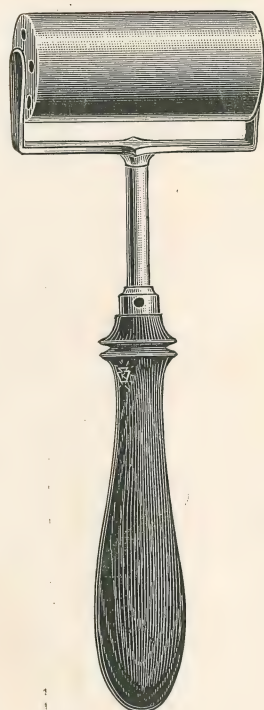
Electrodes



138	Single eye electrode, gold plated	\$2 00
139	Double " " " "	3 00
140	Spinal electrode, sponge covered	1 25
141	Tongue electrode	60
142	Nickel plated handles, per pair	50
143	Prostatic electrolyzer (Shoemaker's)	5 00

Electrodes

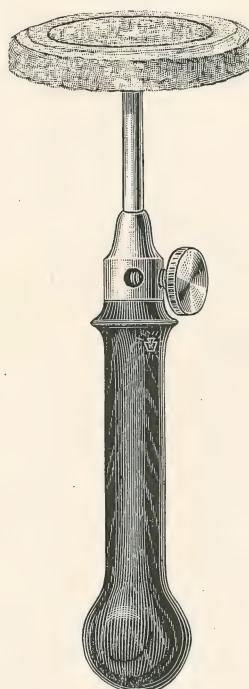
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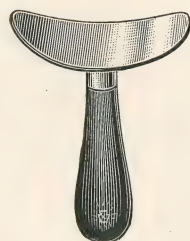
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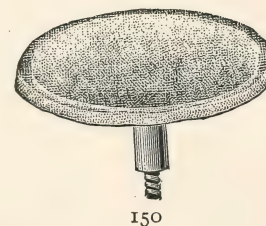
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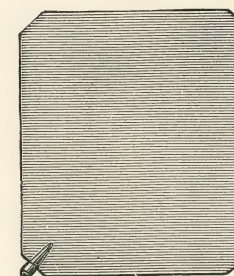
149

144	Massage roller, nickel plated	\$1 00
145	Interrupting electrode handle	1 00
146	Sponge electrode and handle, per pair	1 00
147	Eye electrode, with insulated handle	75
148	Interrupting electrolysis needle-holder	1 50
149	Plain " "	1 00

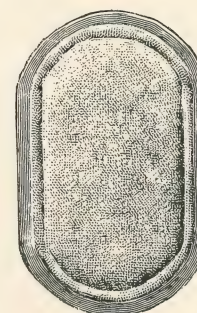
Electrodes



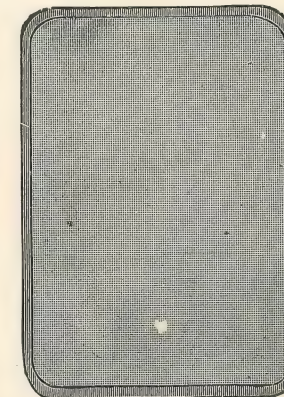
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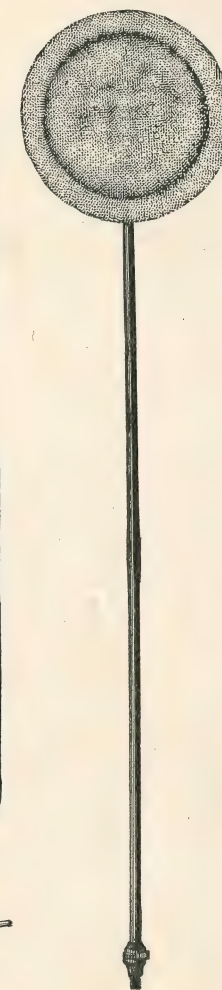
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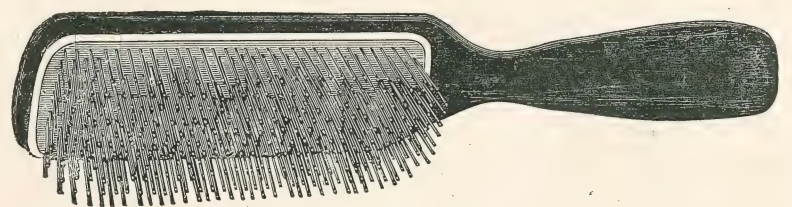
156



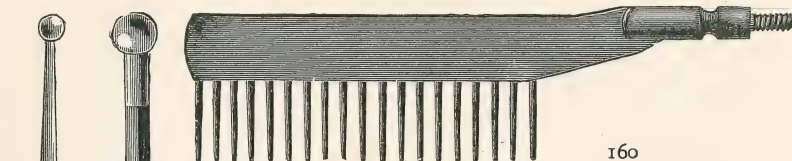
154

150	Sponge electrode, rubber back without handle (male or female thread), per pair,	\$.60
151	Foot plate electrode—zinc 40c.; copper and nickel plated,	.75
152	Oval sponge electrode, with soft rubber back (for direct application with hand),	.75
153	Felt covered electrodes, with soft rubber back— $3\frac{3}{4} \times 2\frac{3}{4}$ in., 35c.; $4\frac{3}{4} \times 3\frac{1}{2}$ in., 45c.; $5\frac{1}{2} \times 3\frac{3}{4}$ in., 55c.; 7×5 in., 65c.; $8 \times 5\frac{3}{4}$ in., 75c.; $9 \times 6\frac{1}{2}$ in.,	1.15
154	Round sponge electrode (with long insulated handle for use under clothing),	1.00
155	Sponge tipped electrode, Erb's pattern, large or small,	.50
156	Conducting cords, silk covered, 5 feet long, per pair 75c.; 8 feet long, per pair,	1.00
157	Battery handles, polished wood, per pair,	.50
158	Soft wire brush electrode for special nerves	.60

Electrodes



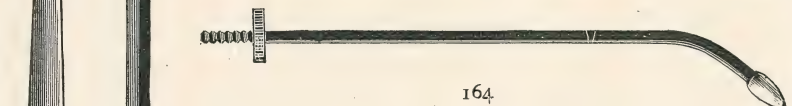
159



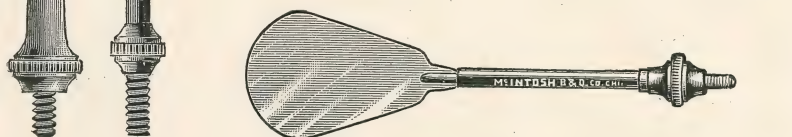
160



163



164

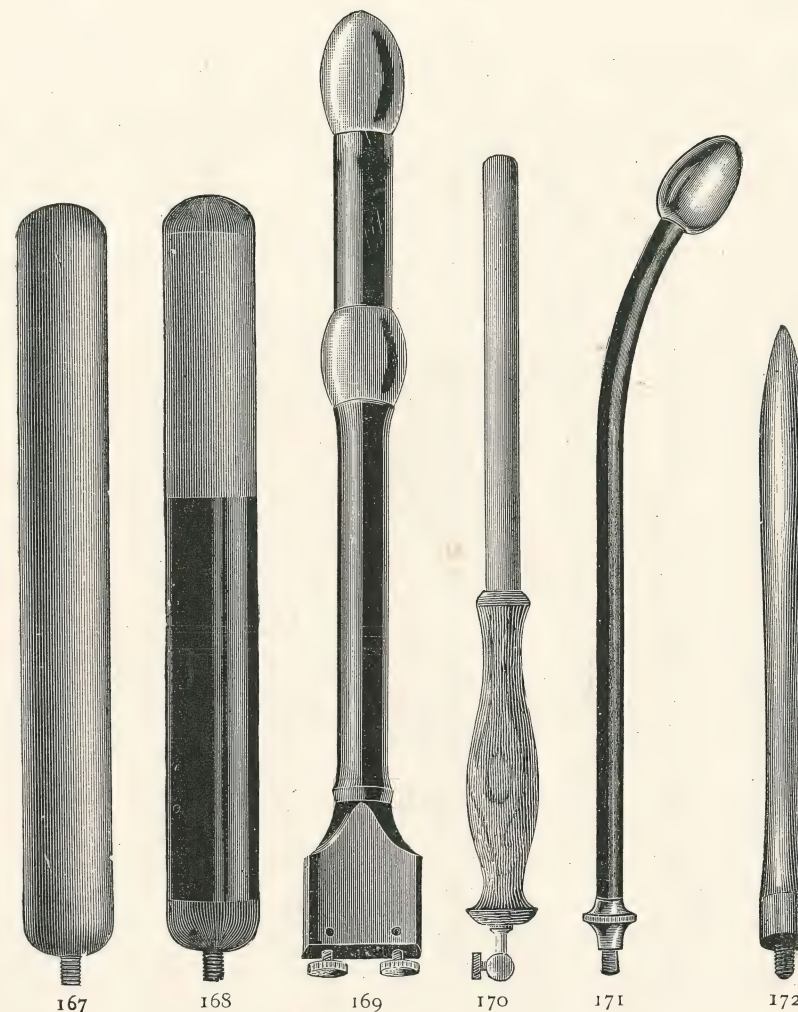


165

159	Hair-brush Electrode, each,	.	.	.	.	.	\$ 1.00
160	Comb Electrode, small, 75c.; large,	.	.	.	.	.	1.00
161	Ear and Nose Electrode,	.	.	.	.	.	.50
162	Eye Electrode,	.	.	.	.	.	.75
163	Larynx Electrode,	.	.	.	.	.	.75
164	Nasal Electrode, with insulated stem,	.	.	.	.	.	.75
165	Tongue Electrode, with insulated stem,	.	.	.	.	.	.60
166	Wrist band electrode	.	.	.	.	.	1.00

Electrodes

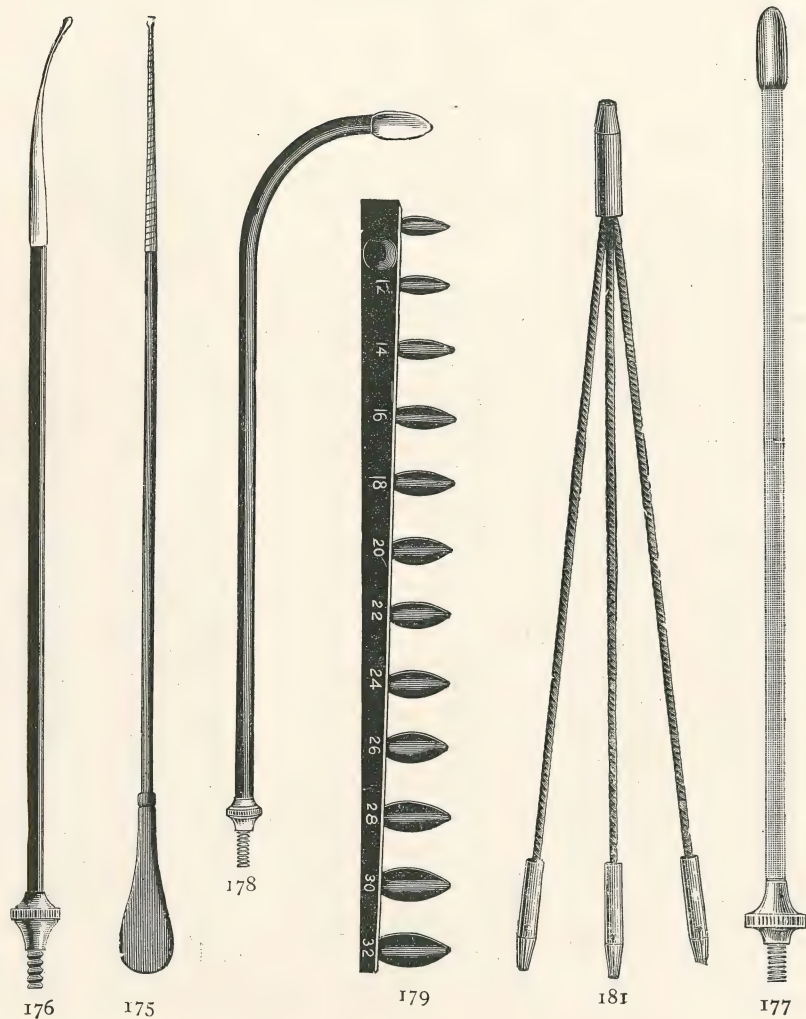
Continued



167	Vaginal Electrode, all metal, large or small,	.	.	.	.	\$.35
168	Vaginal Electrode, partly insulated,	.	.	.	.	1.25
169	Bi-Polar Vaginal Electrode, insulated,	.	.	.	.	2.25
170	Mono-Polar Vaginal Electrode,	.	.	.	.	1.25
171	Mono-Polar Vaginal Electrode, three sizes, $\frac{1}{8}$, $\frac{3}{8}$, 1 inch, each,	.	.	.	.	1.00
172	Rectal Electrode, all metal,	.	.	.	.	.65
173	Rectal Electrode, partly insulated,	.	.	.	.	1.00
174	Rectal Electrode, with ball and long insulated stem,	.	.	.	.	1.00

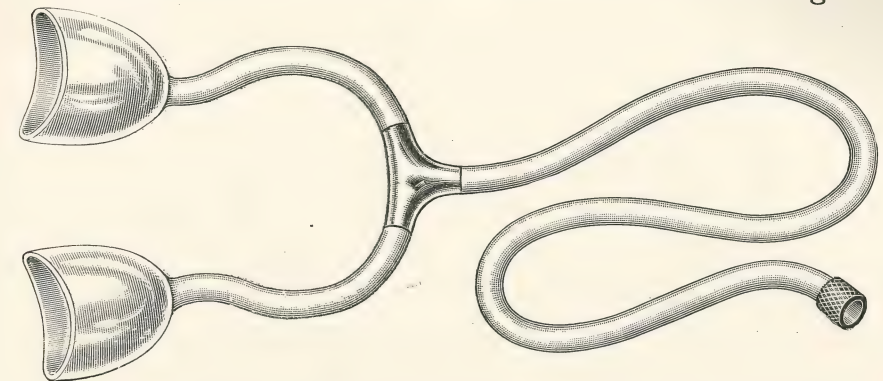
Electrodes

Continued



- | | | |
|-----|---|--------------|
| 176 | Intra-Uterine Electrode, inflexible, insulated | \$1 00 |
| 175 | Intra-Uterine Electrode, flexible and insulated | 1 25 |
| 177 | Uterine or Urethral Electrode, with spiral, flexible, insulated stem | 85 |
| 178 | Urethral Electrode, six sizes, straight or curved, insulated, each | 75 |
| 179 | Ovary Electrodes, one dozen with insulated stem, curved or straight | 2 00 |
| 180 | Metallic Sound Electrode, nickel-plated, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$ in. diameter each | 60 |
| 181 | Electrolysis Needle Holder, with cord and tips to hold one to six needles, from | 45c. to 1 50 |
| 182 | Electrolysis Needles, per dozen, steel, 25c.; platinum, \$1 15; gold-plated, each | 25 |

Glass Eye Cups for Pneumo Massage

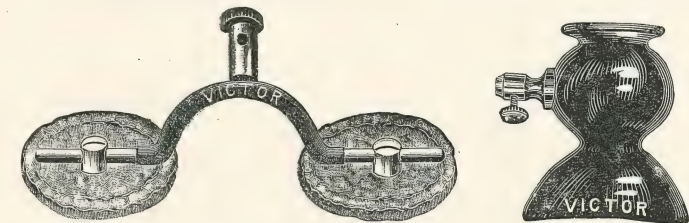


THESE cups are made of clear crystal glass, through which the operator can clearly perceive the action that is taking place during treatment. They are moulded to follow the conformation of the eye-ball as closely as possible. They can be used in connection with any of our ear pumps or with any apparatus capable of compression, suction and vibration of the air.

Price per set as shown \$3 00

Electrodes

For Applying Galvanic and Faradic Currents to the Eyes



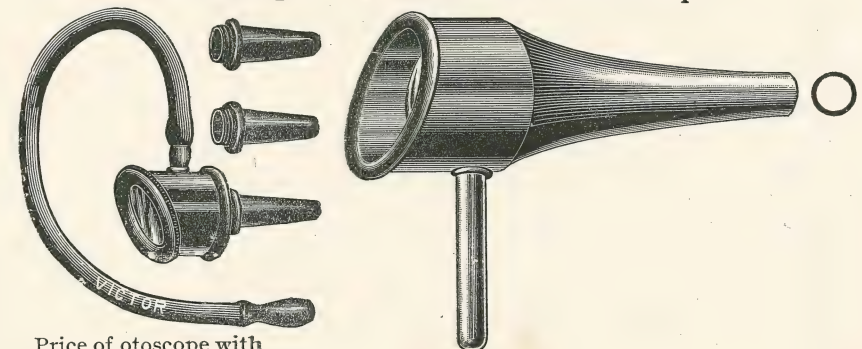
No. 27

No. 28

- No. 27. Double eye sponge electrode, adjustable \$1 25
 No. 28. Eye cup electrode 1 00

Siegel's Otoscope

Plain Otoscope



Price of otoscope with four feet rubber tubing for attachment to ear pump . . . \$2 00

Price with four feet rubber tubing for attachment to ear pump . . . \$1 25

Keystone Portable Lamp Outfit



THERE has been of late a great demand for a Portable Lamp Outfit among the Medical Profession; and a number of them have been placed upon the market, but owing to the high price has caused the sale of them to be limited.

The illustration above is an Outfit which will answer for all practical purposes and the price within reach of the general practitioner, who will find it valuable for Nose, Throat, Eye and Dental work or where any field of light would be required to illuminate the dark recesses during an operation, and especially where the examinations are to be made at the patient's home, and the proper light found impossible.

The Outfit consists of a Battery of Dry Cells mounted in a highly polished Oak case with a removing bottom to replace new cells when needed, which can be done in a few minutes by the physician himself without returning the Outfit to us.

The Head Band No. 1, which is made of a steel spring going over the top of head, highly nickel plated with an adjusting focusing tube and condensing lens in front, giving the operator full use of both hands while operating. The field of light is brilliant, evenly illuminated and steady.

The Diagnostic Lamp No 2, can be used for any cavities, and with the Shield Attachment No. 3, the Frontal Sinus can be thoroughly examined.

Outfit as shown above complete	\$8 00
Battery Case with battery only	2 50
Head Band only	5 00
Diagnostic Lamp with shield	2 50
Extra batteries	60
Extra lamps	60

Portable Diagnostic Lamps

Can be Folded up and Carried in the Pocket

EQUIPPED with short $3\frac{1}{2}$ volt bulb for ordinary purposes.

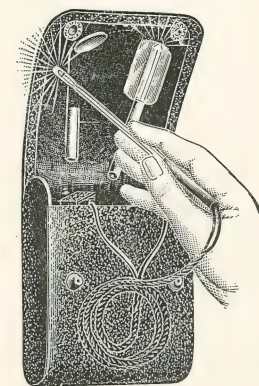
Also long antiseptic bulb for operative work.

Adjustable reflecting mirror for dental work.

Strong well made tongue depressor.

Size, $5 \times 4 \times 1\frac{1}{2}$ inches. Handsome Morocco Finish Case.

Price complete, with two bulbs as above, \$5 00
Extra battery 30



If desired for direct current, we also provide this lamp as illustrated opposite. Price complete, with combined receptacle and socket, long antiseptic bulb, reflecting mirror and tongue depressor . \$5 00

In ordering direct current outfit, always specify whether for Direct or Alternating Current, Westinghouse or Edison Socket.

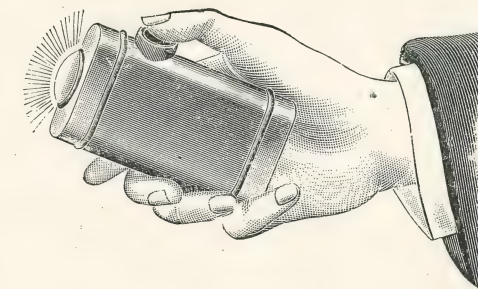
Extra short bulbs, 60 cents each. Extra long antiseptic bulbs . \$1 00



Can be Carried in Vest Pocket

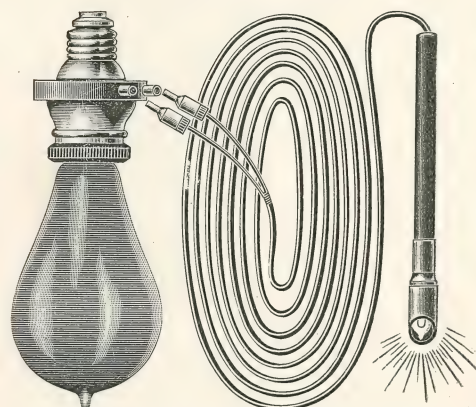
This Ever-Ready Light is not a toy. It gives instant light. No chemicals, oil, smoke nor odor. No heat, matches, trouble or danger. No wires to go wrong. Cannot be blown out by the wind. Useful to Physicians on night calls.

Price, complete \$1 50
Extra battery 30



Portable Diagnostic Lamp Continued

Vetter Tap, Patented



ACCOMPANYING cut illustrates a diagnostic lamp and rheostat for operating it on the electric light current.

This rheostat can be attached to any ordinary lamp socket; the diagnostic lamp can be attached and detached at will, there are no switch levers or contacts to give trouble.

The large lamp that is used for resistance is enameled black and emits no light whatever.

The small lamp is the same as those used in connection with batteries, being mounted to fit into a small socket and when burned out or damaged, is easily replaced in the same manner as the ordinary incandescent lamps.

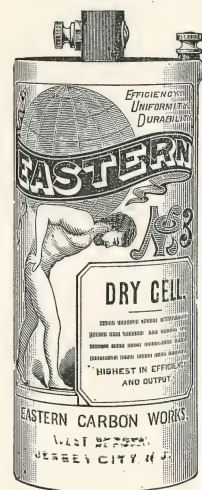
The light is intensely brilliant. Reflector is removable.

We can furnish the rheostat for the 52 or 110 volt direct or alternating currents.

Price, complete \$5 00

The "Ever Ready" Electric Flash Light

The Most Serviceable Electric Light Yet Invented
No Wires, No Chemicals, No Oil, Smoke nor Odor, No Danger



Can be carried into cellar of leaking gas, or put into keg of powder. Wind or storm will not affect the light. Invaluable to the physician making night calls.

Price, complete	\$2 00
" extra bulbs	50
" " batteries	30

Dry Battery

This No. 3 Eastern dry battery is made especially for operating Faradic Batteries, Ear Massage Motors, Diagnostic Lamp, Urethroscopes, Cystoscopes and in fact anything pertaining to electro therapeutic work. We guarantee this battery superior to any other dry battery manufactured. We know it will give you double the service of any other dry battery made. Your battery expenses will be less per year if you use it.

Price \$0 30



Eastern No. 1 Leclanche Battery

THE Eastern No 1 is guaranteed to be the best carbon battery ever made for Electro-Therapeutic work.

The carbon cup and cover is made in one piece. This gives the best connection from the binding post to the body of the battery, and a low internal resistance. It is a great improvement over batteries which have a cover screwed to the cup, which adds resistance and collects salts.

The carbon cup is filled with a specially prepared depolarizer and the opening is *not* closed with pitch which softens and falls into the solution, but with a solid carbon plug. When the battery is exhausted, this plug is easily removed, the old depolarizer replaced with a new charge, the plug inserted and the battery again as good as when purchased.

A heavy circular zinc entirely surrounds the carbon element, thus decreasing the internal resistance of the battery. This zinc is insulated from the carbon by three small fibron points firmly fixed in the carbon, thus doing away with the old style rubber rings which covered a large part of the carbon surface, collected the salts, and short circuited the battery.

The top of the carbon element is specially treated to prevent the capillary attraction of the salt and the consequent corrosion of the metal connection.

The initial current is 14 amperes and the voltage 1.5.

This battery is of low internal resistance. The specially prepared depolarizer gives it great recuperating ability and it is specially designed for high efficiency and durability.

Price, complete \$0 65



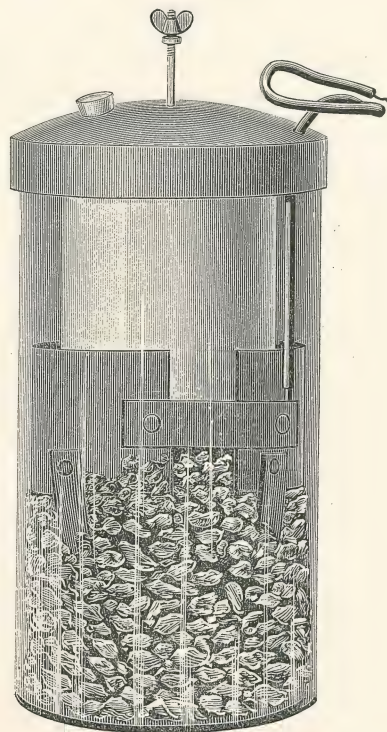
No. 4 Carbon Cylinder Battery

This is one of the simplest form of cell, which is constructed upon the principle of the "La Clanche" or sal-ammoniac cell. The carbon element forms a closely fitted cover which is saturated with parafin, to prevent corrosion and allowing but a little or no evaporation. The zinc element is insulated at the top by a porcelain thimble. The cell is strong, durable and clean, and has given good results for open circuit work, such as operating faradic coils, etc. The voltage will average 1.5.

Battery, complete \$0 45



The "Excello" Improved Gravity Battery



E. M. F.—1.1 Volts Resistance, about—.55 Ohms. Normal Working Current—1.4 Ampere. Normal Discharge Rate per day—6 Ampere hours.

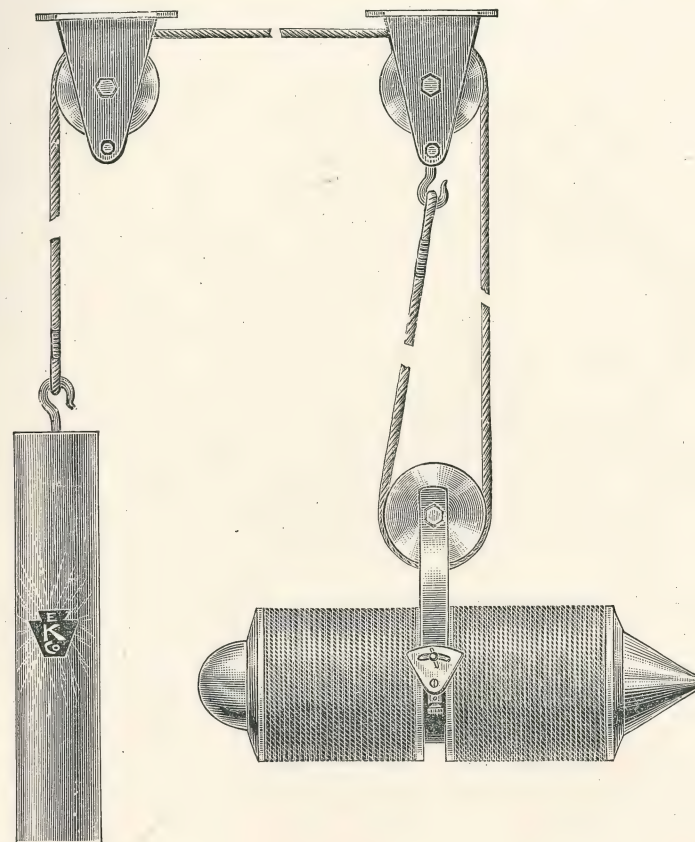
THIS Battery, which is of an improved gravity type, in combination with the original Daniell cell, is the result of years of study and practical experience. Its superiority consists in very low internal resistance, and consequent large current output; long life; constancy; economy of material and labor; reliability; and cleanliness.

The cost of operating the "Excello" Improved Gravity Battery is very small—the labor being a much smaller item than with the ordinary type of gravity cell.

We recommend this battery as being unusually well adapted for charging storage batteries, by permanently connecting three of these Improved Excello Batteries to a storage Battery, a constant and reliable source of electrical energy is obtained which will keep the storage battery fully charged and up to its highest efficiency for a period of from nine to twelve months, on one charge of blue stone. This is of great advantage to nose and throat specialists living in suburban towns where the electric light current is not available.

Price, complete \$3 00

Keystone Mod. Haab's Eye Magnet



THE above Eye Magnet can be used with a storage Battery or the 110 volt direct current, with a suitable Rheostat in connection, so as to regulate the current that any amount of magnetism can be obtained from the magnet, which will remove any size piece of iron or steel usually found in the eye.

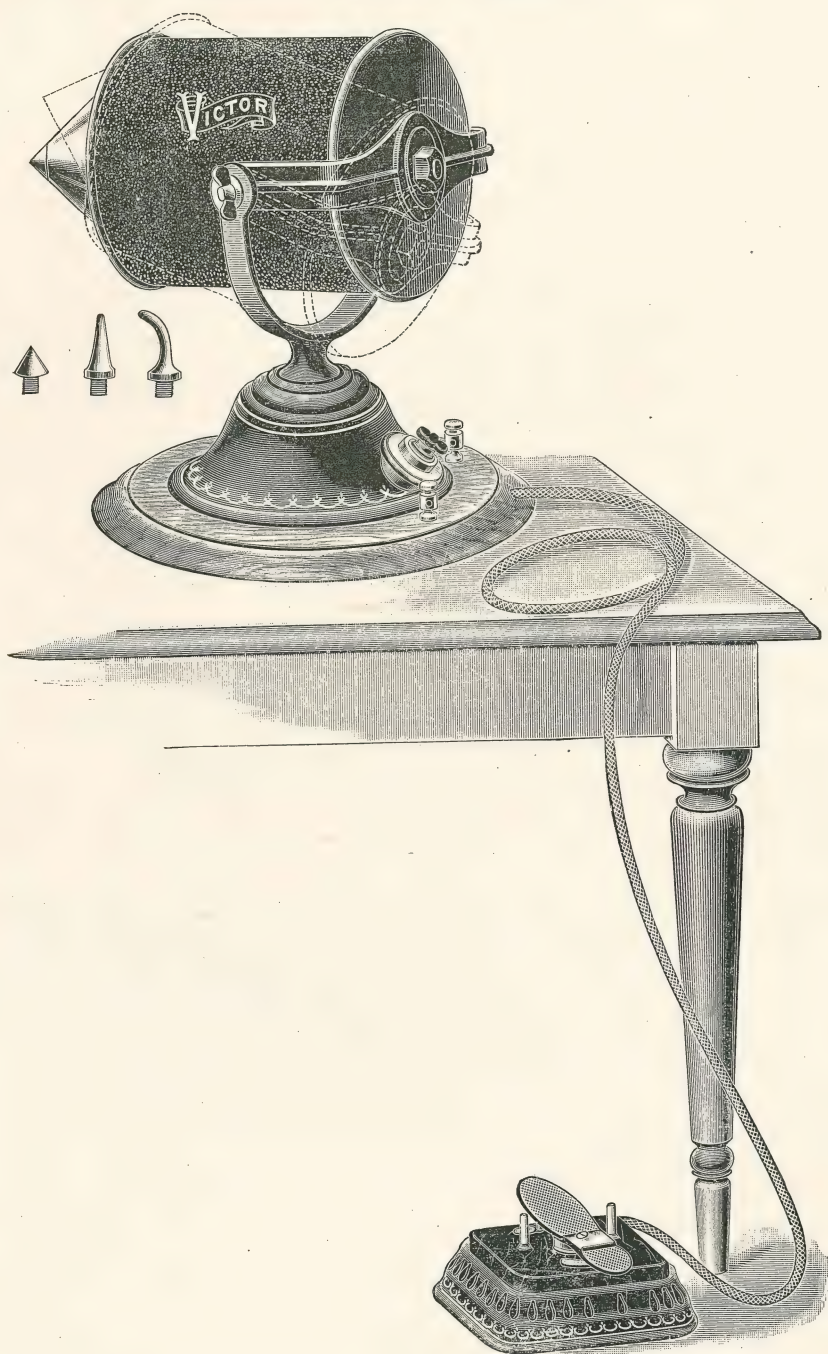
As shown this magnet is suspended with a heavy steel cable, over two pulleys, placed at any distance apart, with a heavy weight encased in a brass tube, sufficient to counterbalance with the magnet, which can be raised and lowered to any height desired. It also has the swivel and trunnion movement, enabling the magnet to be placed at any angle.

Having the magnet suspended in this position requires no extra floor space as is usually found with other make of magnets of this size, being able to raise it high enough, when through using, to allow any one to walk under it without striking it.

Keystone Eye Magnet, with Rheostat for 110 volt, Direct Current, \$125 00

Any other information will be cheerfully furnished.

Giant Eye Magnet



Giant Eye Magnet

THE Victor Giant Magnet weighs about 60 lbs. and has a lifting power of approximately 400 lbs. to the square inch; it measures 10 inches in length from the tip to the rear end and is $5\frac{1}{2}$ inches in diameter.

It is swiveled so that it can be rotated in complete circle, and can be tilted to any angle desired. It is so nicely poised that but little exertion is required in adjusting it to the required position, and it can be immovably locked in any position.

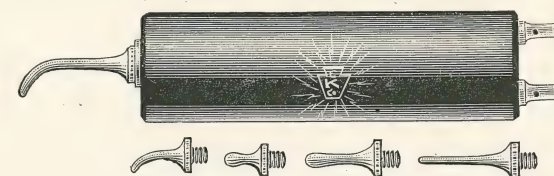
It is best to use a rheostat in connection with this magnet so that its immense pulling power can be kept under control. This is accomplished with the rheostats listed.

We strongly advise the use of the foot controller in preference to the one operated by hand, for the reason that use of the former allows the operator perfect freedom in the use of both hands as well as enabling him to concentrate his entire attention upon the work in hand.

By the use of the very best materials obtainable and by the exercise of proper care in construction we have produced a magnet which is second to none in the world. The finish is up to our usual standard and is bound to please.

Price, wound for 110 or 220 volt direct current for batteries	\$60 00
" " " 500 volt direct current	75 00
" of graduated rheostat for 110-220 volt and battery circuits,	9 00
" " " " 500 volt circuit	12 00
" " " foot controller for any circuit	25 00

Keystone Electro Eye Magnet

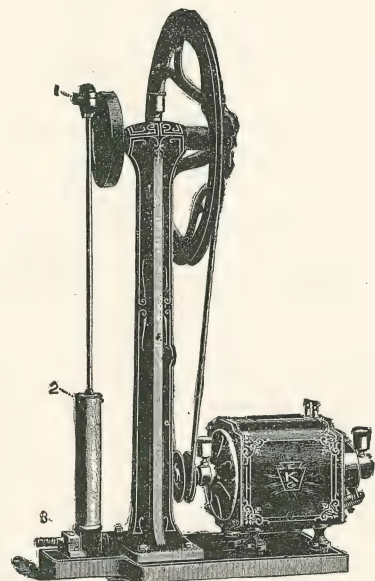


This instrument is for removing bits of iron or steel from the cornea and chambers of the eye. Every surgeon and oculist knows from experience how difficult it is to remove particles of iron or steel filings and turnings from the cornea, even after they have been loosened, and the impossibility of extracting them from the posterior chamber of an eye with ordinary instruments. With the aid of this instrument these operations are easy and simple. To use the magnet the conducting cords are connected with the poles of a battery and the small stylet brought near or in contact with the particle, which adheres to the magnet and is removed. If the particle of iron is embedded in the cornea, it may be necessary to loosen it and then remove it with the magnet, which can be done without contact with the eye. If iron or steel has penetrated either chamber, it is then necessary to introduce the small stylet of the magnet, which attracts the particle, which is easily removed.

Price, complete as shown above for battery current	\$6 00
" " " " " " 110 volt direct current	8 00

Keystone Automatic Electric Air Compressor

For use on 110 Volt Direct Electric Light Current.



THE Automatic Electric Air Compressor was designed to meet the demand for the Physicians having the 110 volt Direct Electric Light Current in their office, doing away with the annoyance as well as delay of the old style hand pumps, especially when using the Nebulizers which require a continuous quantity of air for a much longer time than the ordinary Atomizer.

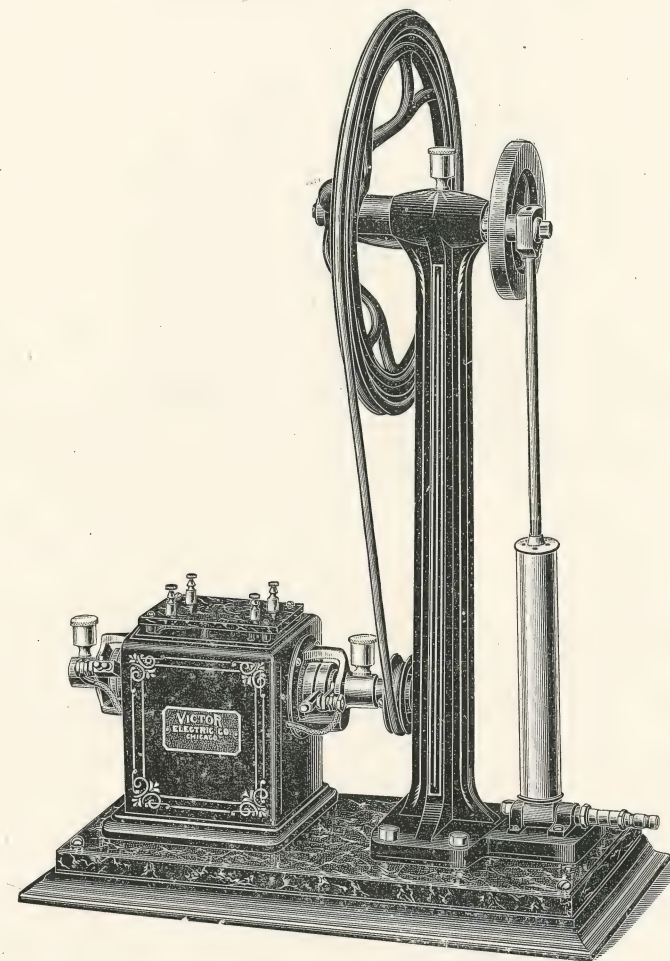
This pump will give from 30 to 40 pounds pressure in a very few minutes. A special feature of this apparatus is the addition of the Keystone Automatic Air Pressure Regulator which, is so constructed that from 5 pounds up to full capacity of pump can be had, if the regulator was set to any given pressure and when brought up to that amount, (which would show on receiver gauge,) it would instantly shut the motor off and retain the pressure until a few pounds of air were used out of Receiver, which in return would immediately start the pump in action.

The Physicians using the Air Receiver and wishing to do away with the hand pump will find the Keystone Automatic Electric Air Compressor a great saving in labor and time.

It makes very little noise while working, is ornamental in design, finely finished and durable and requiring very little space and attention.

Electric Air Compressor (as illustration) \$55.00
With Keystone Automatic Air Regulator extra, 10.00

No. 2 Air Compressor with Transformer Motor



500 volt outfit consists of air compressor operated by $\frac{1}{4}$ H. P. motor and separate speed controlling rheostat.

Accompanying illustration shows the No. 2 air compressor, operated by a transformer motor.

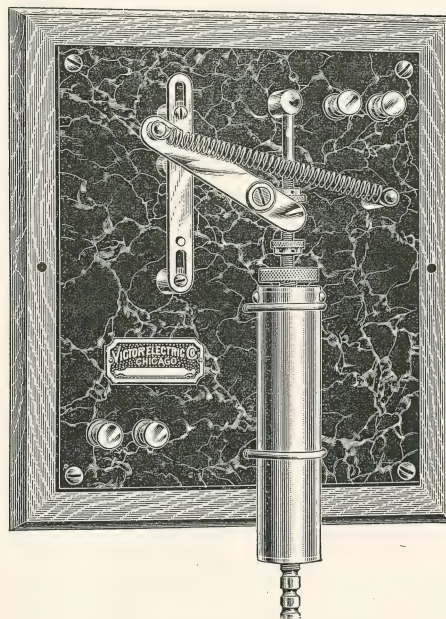
In this case the motor serves a double purpose—besides operating the compressor it supplies an alternating current which, when connected to an alternating current cautery transformer, supplies cautery and diagnostic lamp currents.

By purchasing the Victor Alternating Current Cautery Transformer, price \$25.00, and the outfit as above, a net saving of \$30.00 is effected.

It is not practical, however, to use either the nasal drill or ear pump in connection with the motor transformer when mounted in this way.

Price, wound for 110 or 220 volt current \$60 00
" " " 500 volt current 90 00

Automatic Pressure Controller



THIS apparatus controls the pressure within a range of 15 pounds, by automatically throwing a switch and starting the motor when pressure is too low and stopping the motor when pressure is up to the desired point. It can be set to start at any pressure up to 30 pounds and to cut off at any point desired.

This device simply saves the operator the trouble of throwing a hand switch. It can only be used with direct current motors.

Price, when purchased alone	\$15 00
Price, when purchased with our pump	10 00

Latest Text Books on Electro-Therapy

The Roentgen Rays in Medicine and Surgery. By F. H. Williams, M.D. Price	\$6 00
The Treatment of Disease by Electric Currents. By S. H. Monell, M.D. Price postpaid	6 00
Electro-Therapeutical Practice. By C. S. Neiswanger, M.D. A ready reference guide to physicians in the use of electricity. Price, postpaid	1 50
Massey's Conservative Gynecology and Electro-Therapeutics. Price, postpaid	3 50
Cataphoresis. By W. J. Morton, M.D. Price, postpaid	5 00
Elements of Correct Technique. By S. H. Monell. Price, postpaid	2 50

We can secure any other work on electro-therapeutics that you may desire.

Drilling and Trephining Engine



ILLUSTRATION shows a motor specially wound and adapted for trephining and drilling; a speed regulator is provided in the base of the motor by means of which it is started, stopped and its speed perfectly controlled.

To the motor is attached a cable, sheath, flexible wrist joint and universal handpiece for holding drills, burrs and trephines; the cable and sheath are extra long; a strong, neatly designed stand supports the outfit and the whole is finely finished.

Price, complete as shown in cut, for 110 or 220 volt direct current	\$65 00
Price, complete as shown in cut, for 100 to 115 volt 60 cycle alternating current	75 00
If stand is not wanted deduct price of stand	12 00

Finsen Light



The apparatus here illustrated is unquestionably the best equipment yet devised in this country for the production of ultra violet rays.

Although this lamp produces a large volume of light, it is in size and construction specially adapted to the requirements of the general practitioner.

We furnish it mounted on a low or high stand as desired.

The design and finish are all that could be desired.

The best quartz lenses are used; water circulation is provided for and bags are furnished for this purpose.

The electrodes are of material best adapted for producing the greatest number of ultra violet rays.

Consumes from 4 to 15 amperes according to the volume of light desired.

Adjustment of electrodes is easy and instantaneous, and the entire instrument can be adjusted to any angle or position desired.

A suitable rheostat of neat design and fine finish is furnished.

Lamp can be used on 110, 220 or 500 volt direct circuits and on alternating current. But we must know in each case the kind of current which is available.

Price for use on 110 volt direct or 104 to 120 volt alternating, as shown in cut, complete \$100 00

Price on other currents quoted upon application.

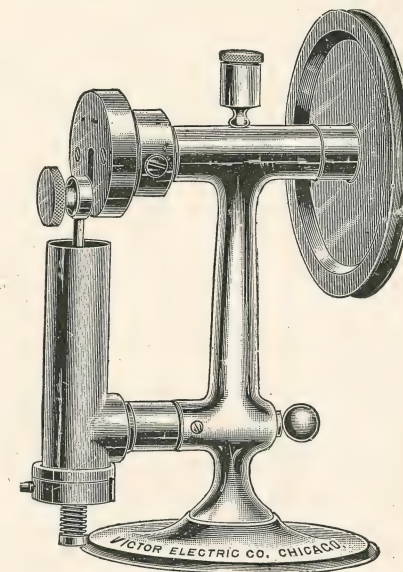
Victor Ear Pump

Protected by Letters Patent Nos. 728, 526.

ACCOMPANYING cut shows the Victor ear pump mounted on a base, and provided with a grooved pulley so that it can be operated by any motor, electric or otherwise. The valve arrangement, adjustment of stroke, etc., is precisely the same as with the Pynchon pump, that is, exhaust alone, exhaust with release, vibration, and compression alone can be obtained, and the length of stroke perfectly adjusted. Speed control being a very essential feature, it would be necessary to have a speed controller in connection with whatever motor was used.

The pump is mechanically perfect and finely finished.

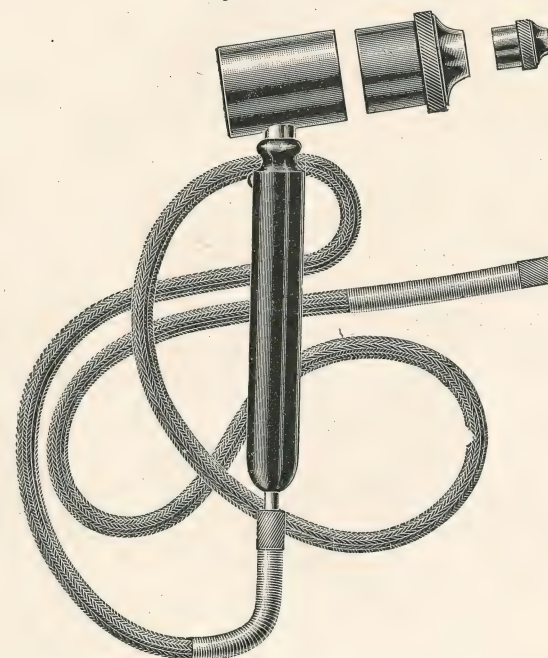
Ear pump, price



\$20 00

Attachment for Pneumo

Eye, Facial and Skin Massage



This instrument can be attached to any of the ear pumps, and as well as being adapted to eye massage, it is useful in facial massage, for building up tissue, eradicating wrinkles, etc.

It can be used for general pneumo massage; the largest opening can be used for eye massage.

As will be seen by the illustration, either of three different sized openings may be used. A hole is provided at the back of the handle at a convenient point to be covered by the operator's thumb; so long as this opening is left uncovered the instrument is entirely inoperative, thus it will be seen that the apparatus is at all times under the in-

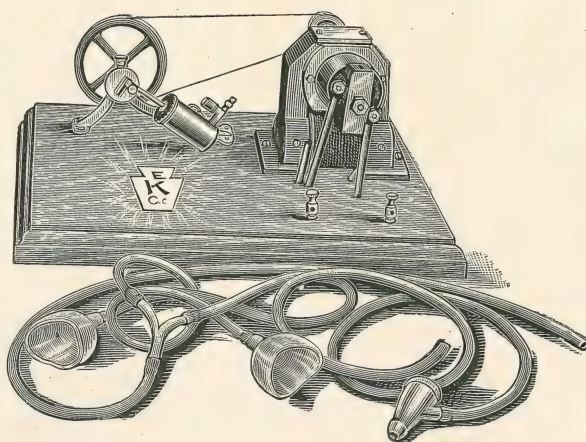
stant and absolute control of the operator.

When used in connection with a Victor ear pump either suction alone, suction with release, vibration, or compression alone can be obtained.

Price, as shown

\$7 00

Keystone Eye and Ear Masseur



THIS cut represents one of our latest and most approved Eye and Ear Masseurs, operated by either the electric light current or batteries. It is mounted on a polished oak base with regulating switch; the motor is of the most durable as well as of the most artistic pattern manufactured; we furnish it with four dry batteries or with an attachment to fit any electric light socket.

The masseur can be operated at any speed; the length of stroke of piston can be adjusted at will; any amount of vacuum can be obtained by regulating a small escape valve, thereby giving a thorough massage to the tympani. With this apparatus we furnish one Seigle's Oscope and one Eye cup with rubber hose.

Price, mounted as above, complete	\$15 00
" " in carrying case	18 00

Vibratory Massage

THIS form of treatment now numbers among its advocates some of the highest and best medical authorities, and there is no longer the least doubt that the benefits to be derived from it are manifold.

Mechano-therapeutics have been undeservedly neglected in the past, although for time out of mind massage administered by medical gymnasts has been prescribed by physicians for certain ailments. It is only recently that apparatus has been devised which has made it possible for the physician to perform this work himself, without sacrifice of either time or dignity.

In the Victor vibrator the power is supplied by an extremely high speed electric motor which operates suitable mechanism for converting this power into vibratory waves of such power that, when applied at a point in the upper chest region, they will penetrate and permeate the entire trunk; or if the operator so wills, they may be made so gentle as to barely ripple the tissues in the immediate neighborhood of the point of application, both their frequency and vigor being under perfect control.

Attachments are furnished for localizing the treatment when necessary.

Lubrication is an important factor in keeping high speed mechanism of this nature in smooth working order, a point that has been well looked after in the "Victor;" and what is perhaps of fully as much importance, we have effectually confined the lubricating oil to the places requiring it, and it is impossible for any of it to escape while the vibrator is in action, thus insuring perfect cleanliness both to operator and patient.

We are frequently asked by correspondents to name the particular diseases in which vibratory massage is considered especially efficacious. This question is in part answered in the brief article on vibratory massage by Carl Sandzen, M.D., printed elsewhere in this catalogue. We wish to say in this connection that we esteem it a favor to have our patrons report results, whether favorable or not, obtained by the use of our instruments. All such letters are carefully tabulated and filed, and are frequently of great benefit and assistance to others who are exploring the same field.

The improved Victor No. 1 massage handle undoubtedly has the widest application of any massage implement on the market, and is best adapted to the needs of the general practitioner. We make a modification of this handle much smaller than the regular one; the smaller one is intended for the use of the eye, ear, nose and throat specialists, and can be attached to our No. 2 or No. 4 transformer outfits. The No. 2 handle is the best adapted to skin and scalp massage, and for massage cupping with the rubber cup vibratode.

AN ARTICLE ON VIBRATORY MASSAGE

BY

CARL SANDZEN, M.D.

(Copyright, 1903, by Victor Electric Co.)

PART I.

MASSAGE is mechanical operations with moving pressure upon the soft tissues of the human body, executed for therapeutical purposes. The operating forces are either direct or indirect manual, aided by especially constructed apparatus for different purposes.

The history of massage is probably as old as the history of mankind, daily experience having proved, for example, the value of rubbing of aching limbs or a stiff back, certainly as well resorted to by the uncivilized aborigines as by the cultured man of the present time.

Massage is described in the old Asiatic literature (China, India, Persia, etc.). In Europe the Greeks very early had professional masseurs (pediatribes) and none less than Hippocrates has described the value thereof in constipation, distortions, etc.

It would take me outside the limits of this little treatise to give even the shortest description of the history of the development of this branch of medicine. Be it only briefly stated that Sweden is the country where massage was first given its proper place in medicine, as a part of the rational therapeutics. Ling and Zander were the men whose names are forever mentioned in connection with mechanico-therapeutics. The best division of the different movements of massage is;

1. Effleurage (light centripetal striking).
2. Frictions (frictions, hard or light).
3. Petrissage (kneading, pinching, etc.).

4. Tapotement (tapping, shaking, vibrations).

It is with the fourth part we here have to deal.

The so-called *Vibratory theory* dates very far back, its usefulness having been known almost as long as massage itself.

In 1734 Abbe St. Pierre invented and constructed his "trémousoir," as a means of counteracting a sedentary mode of living.

It was quite extensively used in France and among others highly praised and recommended by Voltaire, the great thinker, critic and poet.

Dr. Zander began in 1868 to use vibrations produced by different very cleverly constructed apparatus, as, for example, his "headshaker" against neuralgia, insomnia, etc.

Professor Charcot, the eminent French nerve specialist, had noticed the quieting effect of railroad traveling on patients with tabes dorsalis (locomotor ataxia), and this gave him the idea of his shaking chair, fauteuil trépident, which he used in diseases of the spinal cord, especially locomotor ataxia.

In 1878 Dr. Vigoureux used an immense tune fork with a resounding box against hemianesthesia and contractures of the muscles, so common in hysterical patients, against the terrible pains in the legs in locomotor ataxia, etc.

Boudet invented a similar apparatus that he used with great success for local anæsthesia and neuralgia.

The above is only a very short expose to demonstrate the usefulness of the vibratory massage in several diseases. It would be of no value to further follow its development. It is better to first answer the question: What is the physiological action of vibratory massage?

Like all massage, it is irritating. In the first place it acts upon the skin, increasing its activity, especially as a sweat-secreting organ. In the next place it acts as a mechanical irritation of the muscles, because it is a known physiological fact that, independent of the nervous irritation, mechanical irritation produces a contraction of the muscle through the muscle's own irritability, which contraction carries with itself an increased blood supply, increased assimilation, heightened temperature and an increased state of nutrition.

This way of irritation of the muscles is a very powerful irritation, and it is active even when its electric irritability is lost.

Therefore, this treatment is a powerful therapeutical agent in preventing muscular atrophy, and it will restore thin and weak muscle groups to normal volume and functional activity. It is also useful in what we call general massage, in persons weakened by diseases, or as a substitute for exercise in people leading a sedentary life.

But not only on the striated, but also on the unstriated muscles does vibratory massage act irritatingly, and it will thus be found useful in diseases of the digestive tracts, atony of the stomach or intestines, with its long list of ailments.

Furthermore, this irritation by vibratory massage is very powerful on the nerves, giving it an almost unlimited field of usefulness.

The mechanical irritation of the nerves is twofold, viz.: Through action upon the nerve end apparatus in the skin and through action upon the nerve trunks themselves, especially if the concussion can be made against a hard support, for example, the supraorbital nerve just outside the foramen, or in cissura supraorbitalis or the occipital nerve just back of the mastoid process.

Pressure upon a sensory nerve creates a sensation increasing in proportion to the pressure until with increasing pressure the pain disappears. The same result comes from repeated blows, percussions, upon a sensory nerve. We have here thus a double advantage in the treatment of neuralgias (pressure and rapidly repeated blows).

Frequently repeated, very light blows, can also, as we know from experiments and practical researches, change the trophical and other conditions of the nerves and cure nervous symptoms of different character, neuralgias, parasthesias, anesthetics, etc.

Vibrations have also a stimulating tonic effect upon nerves as evidenced by the pleasant sensation of lightness and clearness of the head after application of light vibrations along the frontal and occipital nerves, etc.

But not only actions of the sensory, but also of the motor nerves are modified by mechanical irritation.

Light pressure increases the irritability, strong decreases the same in the nerves, and consequently in the muscles governed by them. That means that we by vibratory massage treatment can make cramp in muscles disappear, etc.

The most remarkable phenomenon here is the influence of vibrations upon the heart action.

If you place an applicator of about the size of your hand on the chest over the heart and use medium strong vibrations, the heart will soon be influenced. If before the heart action was too fast and irregular, it will soon become regular and slower. The probable cause is the irritation of the X nerve, the pneumogastric nerve or vagus.

Vibratory massage can further increase the activity of secretory glands and favor and hasten absorption of exudations, etc.

PART II.

After our short description of the physiological actions of vibratory massage, we will now consider the practical use of the same in diseases mostly treated and benefited thereby.

We begin with the superficial layers of the body as in the first part of this treatise.

1. Vibratory massage increases absorption, therefore it is useful in

hastening restitution in contusions, where small bloodvessels have been injured subcutaneously, for example, hemorrhagic infiltration, ecchymoses and lymph extravasations. It will also prevent abnormal organization of connective tissue, cyst formation and other sequels of incomplete absorption.

Begin with light centripetal (to the heart, thus following the course of the veins and lymphatic vessels) strikings, frictions, with the palm of the hand, and follow with mild vibrations for two or three minutes; finish always with about a dozen centripetal frictions. In many instances deforming contraction of scar tissue will thus be prevented.

2. Vibratory massage counteracts muscular atrophy and is thus useful not only in preventing atrophy of muscle groups, doomed to inactivity from different sources, but also in preventing increase of already existing atrophy. Many cases of complete cure of muscular atrophies of long standing are recorded.

According to circumstances, use vibrations of increasing strength with moving of the vibratode along the muscles, up and down, and keep up the treatment for at least five minutes. If the treatment is given as general exercise, the whole time of the seance ought to last not over fifteen minutes, evenly divided; that is, the larger muscle groups are vibrated longer than the smaller.

Finish always with a dozen or more light centripetal frictions.

If local infiltrations, usually felt as lumps in the mass of muscles, are found, special importance must be paid to them and an extra prolongation of the treatment made, with the vibratode placed right over the infiltrated areas.

Contractures very often require a long continued and rather severe application, up to ten minutes along one single muscle group.

3. The vibratory massage according to length and strength of application on the nerves creates different sensations until disappearance of sensation, is previously mentioned. In neuralgias thus begin with strong vibrations, with the vibratode pressed hard against the nerve, where it goes over a bony or otherwise firm support, and continue this strong vibration a very short period, less than one-quarter minute, then change to mild treatment, but increasing until as a finish you give very strong vibrations for the same short period as in the beginning.

This way is not always possible on account of the extreme tenderness of the affected nerve or nerves, but if possible it is the most effective. In the latter cases we must begin with mild vibrations and increase until as strong vibrations as the patient can endure.

The vibratode should not all the time be held over the so-called pressure points or pain points (Valleix's *puncta dolorosa*), but the vibratode must be moved along the nerve trunks, but these points must always be detected and receive the main part of the treatment. The pain points are with few exceptions coincident with the parts just outside of a bony canal or where the nerve goes over a hard support.

In supraorbital neuralgia the pain point is in incissura or just outside of foramen supraorbital, in occipital neuralgia just back of processus mastoideus, in intercostal neuralgia we have three pain points, viz.: near the spinal

column, in the middle-auxillary line and near the sternum. In sciatic (rheumatism) neuralgia use as strong vibrations as possible over the gluteal muscles against the pelvic bones. In paresthesias and anesthetics mild vibrations along the nerves supposed to be affected are very beneficial. To give any certain length of time in treatment of the different nervous diseases (cases) is difficult, but no treatment should be carried out over three to five minutes over one nerve, except in sciatic rheumatism (Tschias), where many times ten minutes is scarcely long enough. In neuritis mild treatment must be used in the acute and subacute stage, and only in chronic cases a harder course might be resorted to.

4. That even diseases of the central nervous system and spinal cord are in many instances highly benefited by vibratory massage is already mentioned in the first (theoretical) part of this pamphlet, but it would take a large book to, in detail, describe the different ways of using vibrations in treating these diseases. Every physician will soon, from his own experience, find where and how the applications mostly benefit their patients; no two are alike.

In spinal diseases (for example, locomotor ataxia) use the vibratode along the sides of the spinal column and over the spinal processes. On the head, follow, as a rule, the long nerves, the occipital and frontal, etc. It is here impossible to give any positive rules for strength of the vibrations or for time of exposure. Only one precaution must be taken—stop the treatment on the first signs of tiredness. As long as the treatment feels invigorating and pleasant it is usually also beneficial.

The personal experience has its widest field here.

5. In chronic inflammatory conditions of joints (contusions, distortions, etc.) vibratory massage has proved itself a valuable means of lessening inflammation, increasing absorption, etc. Mild vibrations must be used and the vibratode should be moved over the entire surface.

6. Of a decided value is the vibratory massage in atonic conditions of the stomach and intestines.

The treatments consist of a prolonged application (five to ten minutes) by means of a broad applicator over the stomach and along the colon, beginning from the cecum up colon ascendens from right to left over colon transversum and down along colon descendens and the sigmoid flexure.

In constipation, depending upon atony of the rectum, use an oval-shaped applicator, pressed against the anus (five to ten minutes).

7. In palpitation of the heart or irregular heart action of nervous origin, use a large vibratode over the site of the heart and mild vibrations. Three to five minutes is the time usually required to get result.

8. Vibratory massage is also used in the treatment of disorders of the female pelvic organs. Different kinds of applications have been tried, but for my own part I recommend only the external treatment and I believe that the use of sounds, etc., does more harm than good. With external treatment is meant an application outside of the uterine cavity.

Further experience is necessary before we can fully decide upon the

value of vibratory massage in this field, but I believe that the future will fully prove its effectiveness and advisability.

As previously stated, very many, not to say the most, abnormal conditions of the human system are cured or benefited by vibratory massage, but there are also contraindications for massage in some diseases, of which we here will give an expose as a guide for physicians with insufficient experience

I.

Pathological changes in the walls of the bloodvessels.
Arteriosclerosis.
Aneurysms.
Thrombus.

II.

Purulent local processes and malignant tumors.

III.

Local tuberculosis and erysipelas.

IV.

Acute inflammations.

Victor Vibrators

THE unusual demand which has recently developed for vibratory massage apparatus has tempted a number of manufacturers and others with no previous experience in this line to put on the market all sorts of hastily gotten up appliances which, as a rule, prove disappointing to the purchaser. In selecting an outfit the physician should convince himself that the apparatus possesses the following absolutely essential features:

Must be capable of producing no less than 6,000 vibrations per minute (preferably more) with a means of reducing the number to one-quarter that number.

Vigor or strength of vibrations must be controllable.

Must possess sufficient mobility to enable the operator to move the applicator and *not* the patient during treatment.

Must be so constructed that no lubricating oil can escape to soil clothing of patient or operator.

Vibratodes or applicators must be properly designed and constructed.

Wearing parts must be specially well constructed to resist frictional wear.

Victor vibrators possess all of these points of excellence and many more.

You can't make a mistake in ordering one of our equipments; we allow you to examine and test your purchase before accepting it.

NOTE.—Inquiries relative to method of treatment in specific cases are given careful attention by a physician of wide experience in the use of vibratory massage apparatus.

No. 1 Victor Massage Machine

For 110 or 220 Volt Direct Current

Patented Oct. 27, 1903

THIS outfit consists of our regular massage motor specially wound to give proper speed for this work, with speed controller in base. (It is absolutely essential to have the right kind of motor and controller if good results are to be obtained.) To the motor is attached our No. 1 physician's handle, separately illustrated and described elsewhere in this catalogue, and this handle is unquestionably the *best on the market* for physicians, owing to the fact that the *strength* as well as the number of vibrations is under *perfect* control.

The pedestal can be adjusted to any height desired; the top rotates, thus allowing the motor to adjust itself automatically as the operator moves the massage handle.

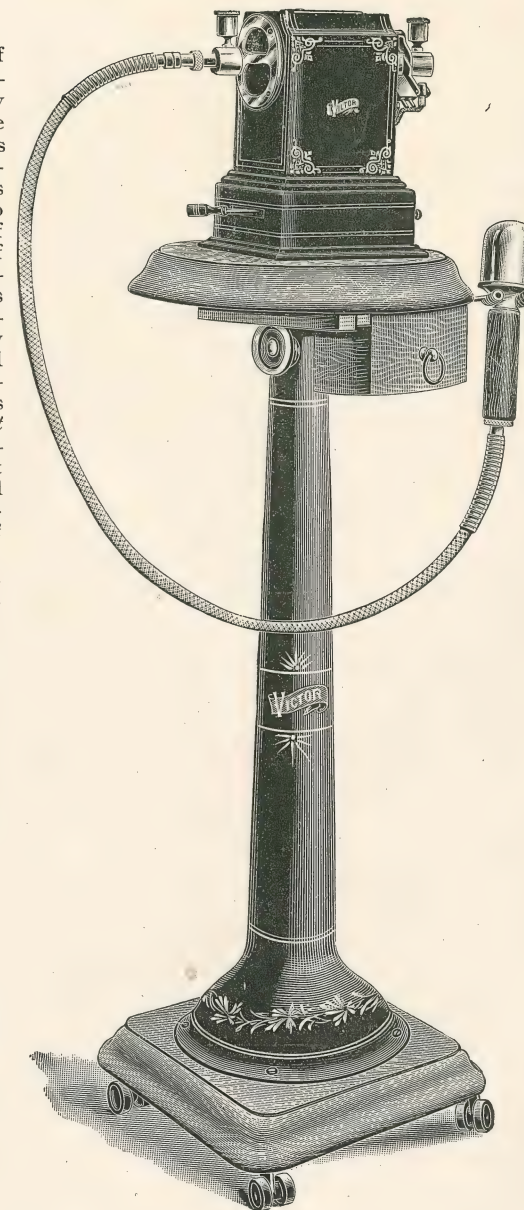
The top and base are finished in golden oak; the column is iron finely finished, and patent swivel, leather faced castors are provided.

Price of outfit without pedestal, for 110 volt current \$70 00

Price of outfit without pedestal, for 220 volt current 73 00

We furnish \$5.00 worth of applicators free with this outfit, which purchaser may select if he chooses, or we will send a selection of six.

Price of pedestal \$20 00



No. 3 Victor Massage Outfit

For the Alternating Current

Patented June 24, 1902, and June 30, 1903



THIS outfit differs from the No. 1 outfit for alternating current only as to the handle furnished. The No. 3 handle imparts a lateral rubbing movement to the applicator—very useful in facial and scalp massage, but of quite limited application in the medical field.

It is an ideal handle for barbers, imparting as it does precisely the movement desired in their work.

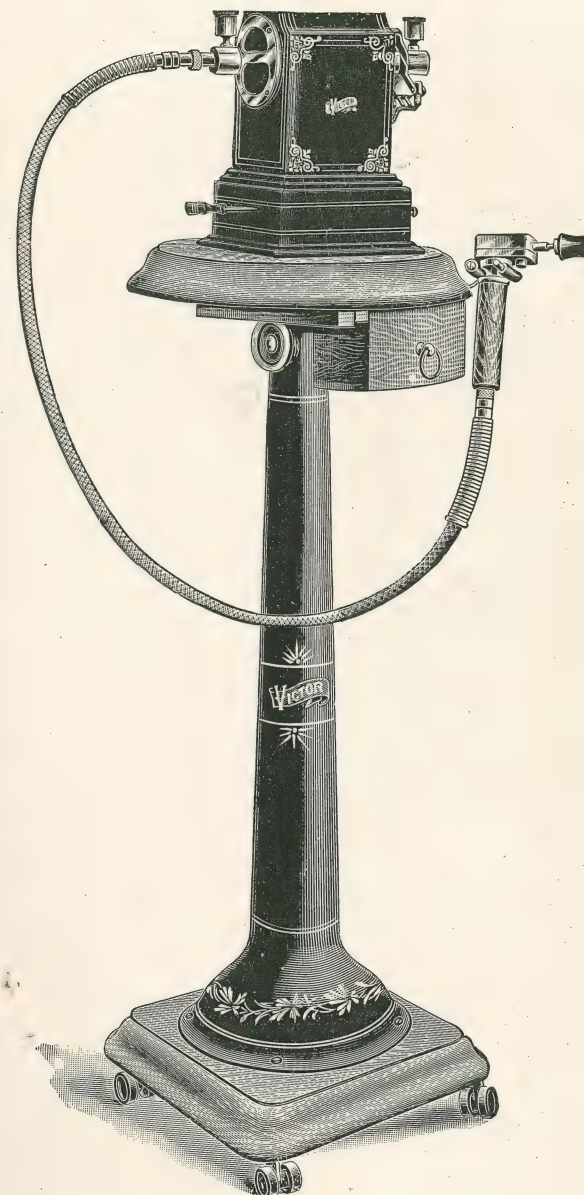
It is the simplest in construction of any handle on the market and, therefore, the most durable. The moving parts are made of the best tool steel, hardened and ground to fit. The pedestal is elsewhere described.

Price of outfit (with three rubber cones) for 60 cycle current	\$75 00
Price additional for 125 or 133 cycle current	5 00
Price of pedestal	20 00

No. 3 Victor Massage Outfit

For 110 or 220 Volts Direct Current

Patented June 24, 1902



THIS outfit differs from the No. 1 outfit for direct current only as to the handle furnished.

The No. 3 handle imparts a lateral rubbing movement to the applicator—very useful in facial and scalp massage, but of quite limited application in the medical field.

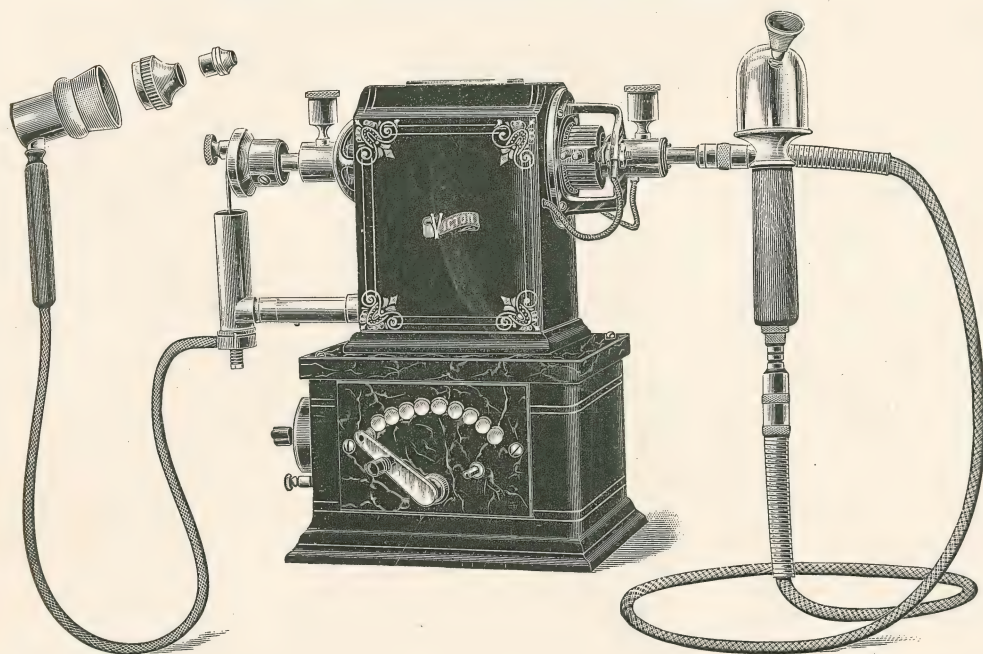
It is an ideal handle for barbers, imparting as it does precisely the movement desired in their work.

It is the simplest in construction of any handle on the market and, therefore, the most durable. The moving and wearing parts are made of the best tool steel, hardened and ground to fit. The pedestal is elsewhere described.

Price of outfit (with 3 rubber cones) for 110 volt current	\$70 00
Price of outfit (with 3 rubber cones) for 220 volt current	73 00
Price of pedestal	20 00

No. 4 Victor Combination Pneumatic and Mechanical Vibratory Massage Outfit

Protected by Letters Patent 728526 and other patents pending



Price of outfit complete as shown with all attachments, 110 volts direct current	\$107 00
Price of same for 220 volt direct current	110 00
Price of motor and regulator without attachments, 110 volts	50 00
Price of motor and regulator without attachments, 220 volts	53 00
Price of No. 1 massage handle with 6 applicators	35 00
Price of small pneuma massage pump	15 00
Price of pneuma facial and skin massage attachment	7 00

This outfit consists of a special motor, with double speed controller, a pneumatic pump with special attachments, and the No. 1 massage handle.

THE motor can be operated at any speed from 200 R. P. M. to 6,000 R. P. M.; two speed controllers are provided, one for the pump (which for some work must be operated quite slowly), and one for the vibrator handle; but one of these controllers is shown in the illustration, the other one being on the opposite end of the machine.

The pump is so constructed that any length of stroke from nothing to $1\frac{1}{4}$ inches can be obtained as desired, and either of four movements obtained, viz.: Straight exhaust or suction for developing and building up tissue; suction with release, a very useful movement in ear massage, as well as a very pleasing skin treatment—the effect is a slight lifting and dropping of the membrane or skin; alternate suction and compression for vibratory massage of the ear drum, eye or skin; and last a succession of forward impulses or compressions, for forcing the ear drum inward, and also for driving the blood away from the part under treatment.

For ear massage an otoscope is required, and glass cups are best adapted to eye treatment; neither of these attachments are shown with the outfit, as none but eye and ear specialists would require them.

The attachment shown in the illustration in connection with the pump is so arranged that end pieces of different shape and size (one of them rubber) can be used, an air port-hole is provided in the handle which comes just under the operator's thumb, thus giving him perfect control of the air without regard to the motor; a silk covered hose leads to the pump.

The vibratory massage handle is the No. 1 physicians handle described elsewhere.

Where the massage work is to be confined to the face and head our No. 2 handle will answer all purposes, it is the same as the No. 1 except that it is much smaller, being about one-half size, it possesses all the adjustment features of the No. 1, but does not deliver vibrations of sufficient vigor for general work. It is \$10.00 lower in price than the No. 1.

No. 7 Combination Pneumatic and Mechanical Vibratory Massage Outfit

For Alternating Current

Patented May 19, 1903, and October 27, 1903



Price of outfit without attachments, as shown in cut, for 104 to 115 volts, 60 cycle, alternating current	\$75 00
Additional for 125 or 133 cycle current	5 00
Price of either No. 1 or No. 3 massage handle	35 00
Price of pneuma facial and skin massage attachment	7 00

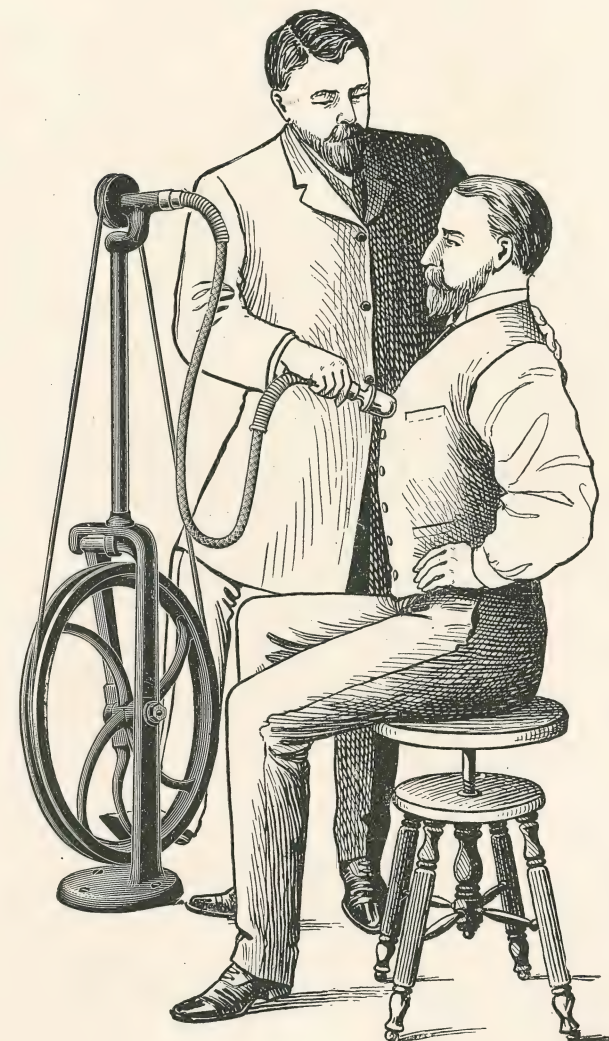
The outfit here illustrated is designed to give the same results identically, where alternating current only is available, as are obtained with the No. 4 outfit on the direct current.

The pneuma massage attachment as shown in connection with the No. 4 outfit is to be attached to the masseur pump shown in cut, and any of the Victor vibrator handles can be used.

The speed control is perfect, covering a range of from 60 to 6,000 per minute.

Quiet in operation, artistic in design, finely finished and perfect in every detail.

Foot Power Vibratory Massage Outfit

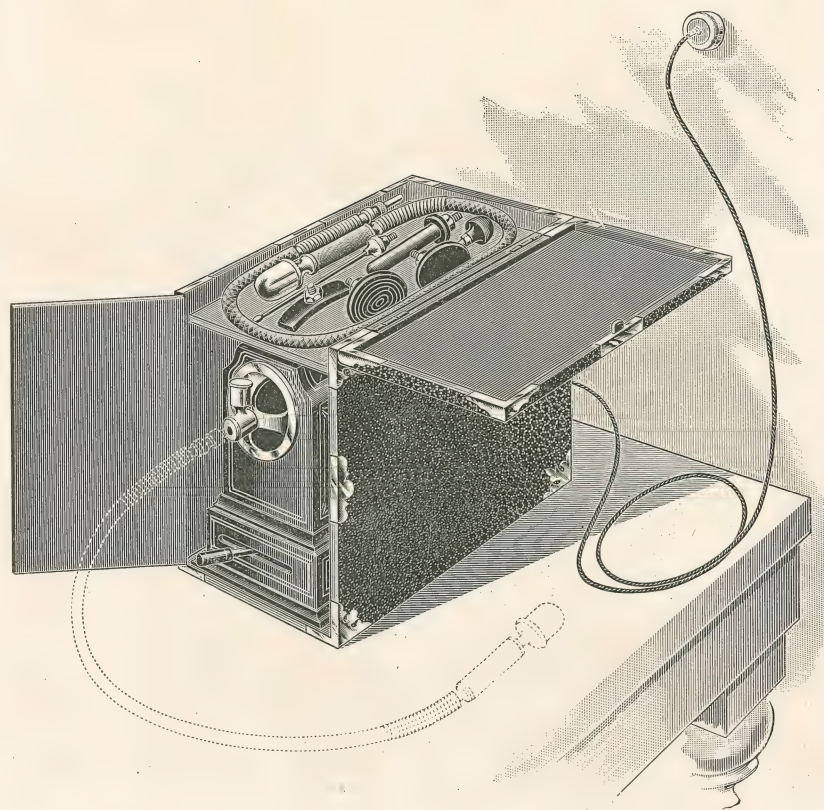


Price complete, as illustrated with either No. 1 or No. 3 vibrator handle and 6 applicators \$65 00

Where no electric power is available the Victor foot power vibrator will be found almost as effective as the electric vibrator. By putting forth a moderate effort as high as 4,000 vibrations per minute can be obtained with this outfit.

Portable Massage Outfit

Patented October 27, 1903



Price of complete outfit as shown for 110 volt direct current . . . \$85 00
 Price of complete outfit as shown for 100 to 120 volt 60 cycle alternating current . . . 90 00

Illustration shows the Victor No. 1 vibrator mounted in a substantial morocco covered case.

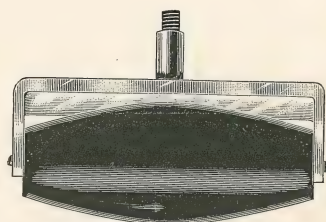
An attachment plug is provided so that the outfit can be attached without trouble to any electric light socket.

The case is so arranged as to contain the vibrator in as small a space as possible. The entire outfit, including case, weighs 40 pounds. The construction of the case is clearly indicated in the illustration.

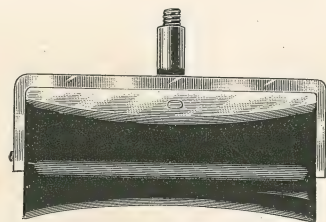
Massage Applicators



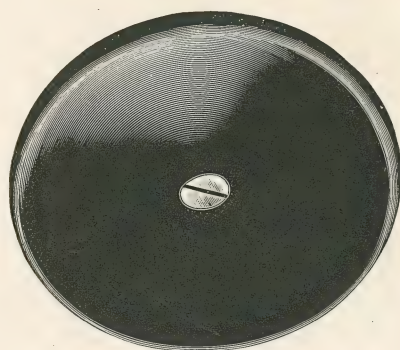
Massage Applicators



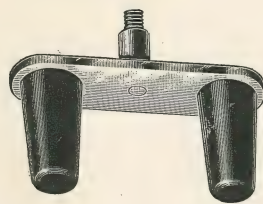
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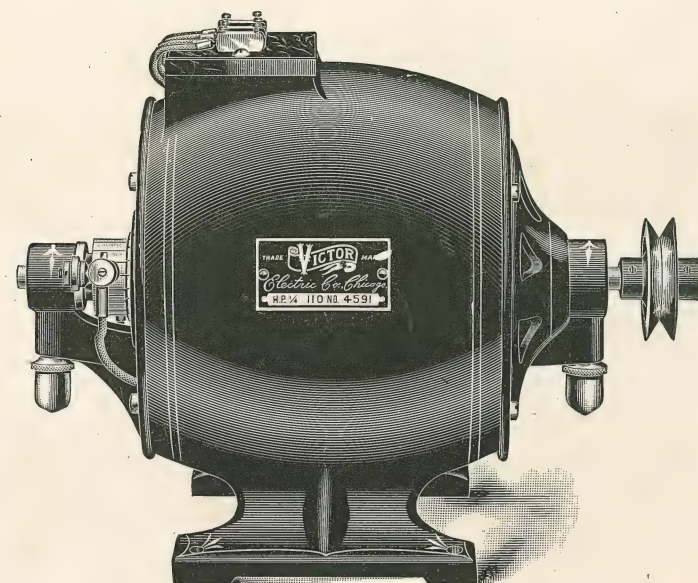


15

Description and Price List

No. 1	Soft rubber cone, small cup for face	\$0 90
No. 2	Soft rubber cone, medium size for general application	1 00
No. 3	Soft rubber cone, extra large for abdominal and general appliances	1 75
No. 4	Soft rubber cone, adapted to mastoid and head	1 00
No. 5	Soft rubber cone, facial application, especially around nose and eyes	1 00
No. 1	Straight probe for mucous membranes	75
No. 2	Straight rectal application (internal)	75
No. 3	Curved applicator for throat and curved surfaces	1 00
No. 4	Rectal for external use	75
No. 5	Hard rubber medium size, for muscular vibration	75
No. 6	Large corrugated rubber disc, for abdominal massage	75
No. 7	Cushioned applicator, general work	90
No. 8	Small corrugated hard rubber disc	75
No. 9	Probe for mucous membranes with spring to lessen severity of vibrations	1 25
No. 10	Rectal applicator (internal) with spring to lessen severity of vibrations	1 50
No. 11	Probe made of twisted silver wire with eyelet to carry medicated ribbon	1 40
No. 12	Large convex hard rubber muscle roller	1 50
No. 13	Large concave hard rubber muscle roller	1 50
No. 14	Large concave hard rubber heart applicator	1 50
No. 15	Spinal applicator (fingers separated sufficiently to span the spine)	1 25

1-4 H. P. Motor

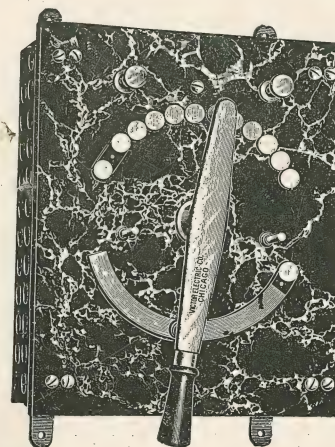


Price for 110 volt direct current	\$37 00
" " 220 " " "	41 50
" " 500 " " "	62 00

This machine, in connection with our speed controlling rheostat, was specially designed for operating static machines, and there is no motor on the market so well adapted for this class of work. Its speed is under perfect control so that any speed desired can be obtained. It is so constructed that it will stand a considerable overload for over an hour without suffering any damage. This is an important feature as in X Ray work, where high vacuum tubes are used, over $\frac{1}{4}$ H. P. is occasionally required.

The motor is iron clad, durable, quiet in operation and finely finished in Japan and nickel.

Speed Controller



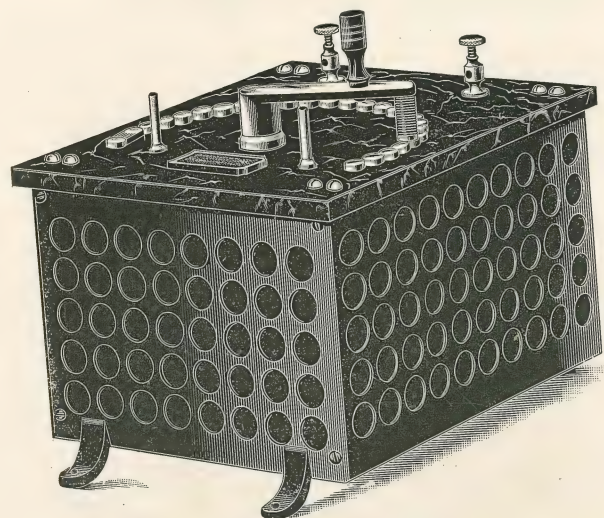
Accompanying cut shows the style rheostat used for controlling the speed of the $\frac{1}{4}$ and $\frac{1}{2}$ H. P. motors. The resistance wire in these controllers is wound upon asbestos covered metal cores and mounted so as to secure the greatest radiation. The containing box is of perforated metal; the top is marbelized slate, thus no combustible material enters into its construction.

The traveling contacts are so constructed that perfect contact is assured, each one being forced down upon the permanent contacts by spiral springs.

All parts are nicely finished in marble, Japan and nickel.

Price \$9 00

25 Point Rheostat

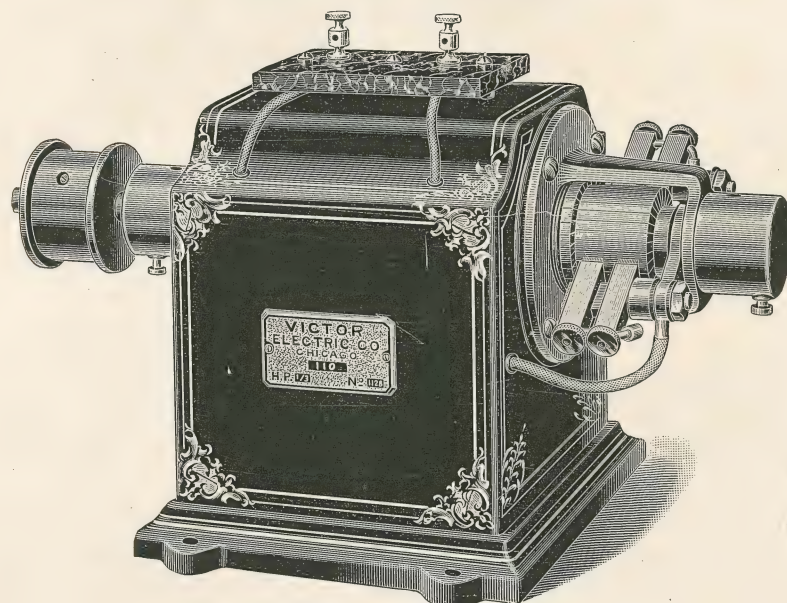


This rheostat, when used in connection with our motors for staple work insures *absolutely perfect* speed regulation.

A different resistance is required for static machines of different sizes and makes, and when ordering, a description of the static machine that is to be operated should be sent us.

Price . \$15 00

1-2 H. P. Motor



Price, wound for 110 volts	\$55 00
Price, wound for 220 volts	61 00
Price of motor wound for 500 volts	67 00
Price of speed controller for above	12 00

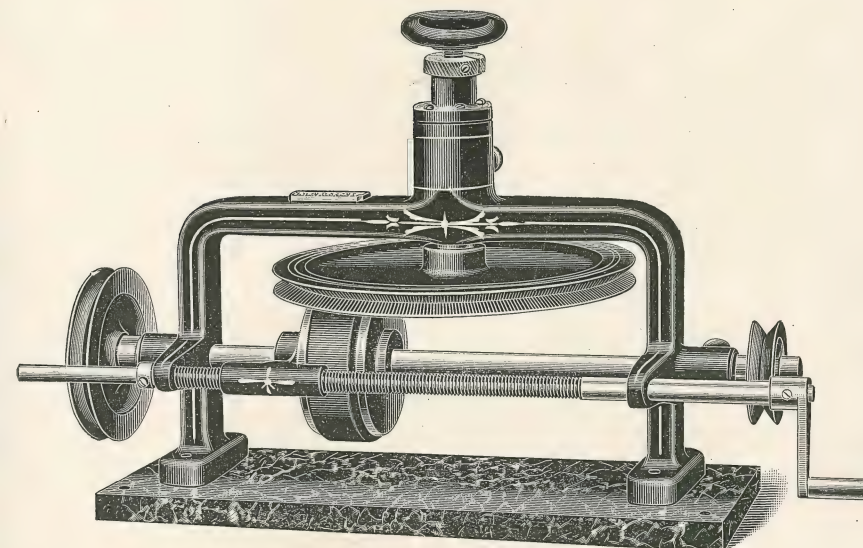
Our $\frac{1}{2}$ H. P. type is semi-enclosed, iron clad, dust proof, slow speed and quiet running.

The bearings are self-oiling and the construction throughout is of the best, insuring durability and uniformly good service.

Friction Speed Controllers

For Use in Connection with Alternating Current Motors of 1-4 H. P. or Less

Patent applied for



Price \$25 00

The fact that the speed of alternating current motors of the induction type cannot be controlled, makes it necessary to interpose some mechanical device between the motor and the machine operated where speed control is desired, as with static machines, etc.

In the Victor controller the motor is belted to the large friction disc, which has a grooved edge to take a round belt; this large disc transmits the power to a smaller leather-faced friction wheel, set at a right angle to the larger one.

The smaller wheel is keyed to a shaft in such a way as to admit of its being moved laterally along the shaft, at the same time causing the shaft to revolve.

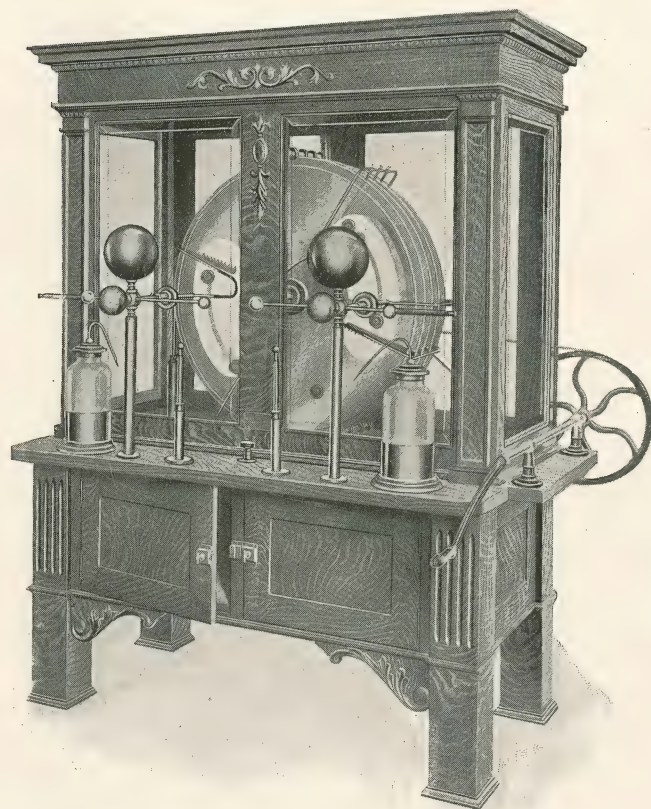
The pulley to which the machine to be operated is belted, is attached to the end of this shaft.

The small friction wheel is moved laterally across the face of the large one by means of a threaded rod, carrying a fork which engages the small wheel; this rod is provided with a crank for operating it.

An adjustment is provided to regulate the pressure of the large disc against the operating wheel.

The nature of the work performed by this apparatus requires that it should be perfect in mechanical construction if efficiency, durability and quietness in operation are to be obtained; we guarantee that it possesses all of these qualities.

Nelson Static Machines



Style "Standard"

16 and 24 Plate Static Machines

This machine is conceded to be the finest regular machine built in the United States. It is without doubt the handsomest piece of furniture the physician can put into his office. The case is of selected quarter-sawed oak, selected for its beautiful markings, cut and joined by the best skilled union cabinet/makers, stained and finished by men who are expert in their particular line. The case is ornamented by real carvings, not the paste imitation so commonly seen. It is fitted with $\frac{3}{8}$ -inch French beveled plate glass. The rear legs are left square to preserve rigidity, so vital to a machine of this kind,

Price F. O. B. Chicago, 16 plates, Style Advance	\$250 00
" " " 24 " " "	275 00

Price includes X-ray outfit electrodes, etc.

Nelson Static Machines

Continued

Style "Standard" 1903

This machine is as its name implies—Standard. While it has few of the fancy touches of the "Advance," it is still equal to the best our competitors put up. Its important features are two large compartments in the base. Very useful for storing of Crooke's tube Fluoroscope cords and other accessories. The mechanical equipment is practically the same as the "Advance." We have distributed them largely over the country, and they have proven the most popular machine of all. Hence the name Standard. The case is fitted with French plate glass $\frac{3}{8}$ -inch thick and beveled.

Price F. O. B. Chicago 16 plates	\$200 00
" " " 24 " " "	225 00

Price includes X-ray outfit as listed below.

Style "Capital" 1903

We have designed this machine to meet low priced competition. Mechanically it is as good as any machine on the market, but less attention has been paid to appearance. It is a very handsome machine. When desired, it is fitted with our new grounding bar, which is suspended above the condenser balls. It does away with the usual arrangement for grounding when the current is to be used therapeutically.

This machine is guaranteed to withstand the wear and tear any inexperienced man may give it equal to the highest price machine offered in the market.

Price F. O. B. Chicago, 16 plates	\$175 00
" " " 24 " " "	200 00

Price includes X-ray outfit. The outward dimensions of all our different machines are practically the same. We place the plates close and compact. The 24 plates occupy in width only $12\frac{1}{2}$ inches. We minimize the leakage thereby considerably.

Our "Standard," "Advance" and "Capital" cases are in height 6 feet 3 inches; length, including drive wheel, 5 feet 5 inches; width of table top, 31 inches.

1 Large Mueller X-ray tube. 1 5 x 7 inch Platino-Cyanide of Barium Fluoroscope universal tubeholder and a pair of rubber-covered connectors.

PLATFORM. Oak, finished to match case, size 27 x 36 inches, round corners, hard rubber legs 6 inches high. The legs are secured by screws and will not break off.

STAND. Has a heavy solid metal base. The stand is made in two parts telescoping each other. The tube holder has every possible adjustment. The crown arm and crown fit into the same holder and may be suspended 7 feet 5 inches above the floor.

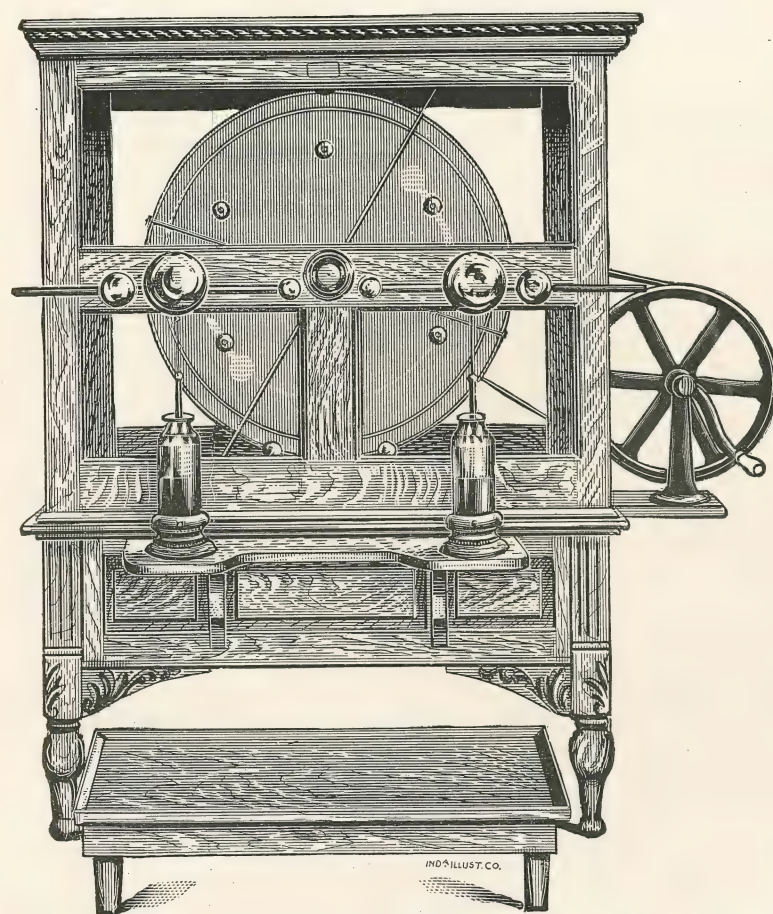
ELECTRODES are 10 in number. Have hard rubber handles and average 20 inches in length.

Other accessories included in the outfit are: Shepherd's crook for connecting machine with platform, 2 pairs of jars, large and small crown arm and crown. 1 pair insulated cords, 1 pair silk tinsel cords and a coil of insulated wire for permanent grounding, 1 lb. sheet tin foil for protecting healthy tissue in X-ray therapeutics.

Size of revolving plates 30 inches in diameter.

" " stationary " 32 " " "

The Columbia Static Machine



THIS Static Machine is one of the best and most reliable machines manufactured. One of the valuable features of this machine is the self regulating device, which enables it to be operated at all times, especially in damp weather, which makes it far superior to all other make of machines, excepting the Nelson Static Machines, which have this same feature.

Price F. O. B. Indianapolis:

Style A 12 Plate with electrodes	\$200 00
" " 16 " " "	225 00
" " 20 " " "	250 00
" B 12 " " "	225 00
" " 16 " " "	250 00
" " 20 " " "	275 00

X-Ray Tubes

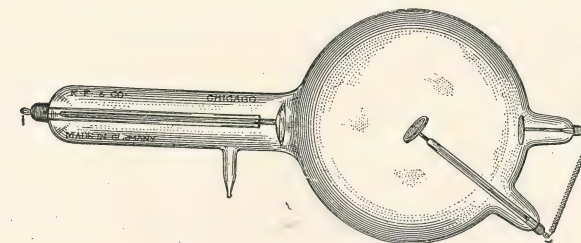


Fig. 8

Fig. 8 shows the Standard Imported Muller X-ray tube. They are equally well adapted to Static Machine or coil current. It is made in four sizes:

No. 13 diameter of bulb, 4 inches, price	\$10 00
" 4 " " " 4 3/4 " "	12 50
" 5 " " " 5 1/2 " "	15 00
" 6 " " " 6 1/4 " "	17 50

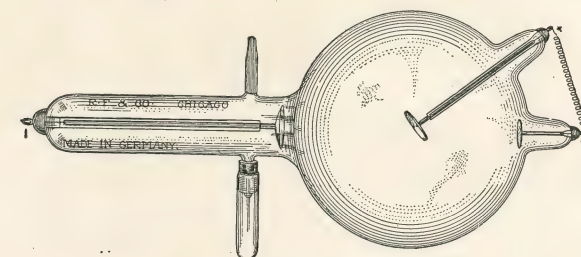


Fig. 9

Fig. 9 represents the modified Gundlach tube. It has a small auxiliary tube attached to it into which is sealed a short piece of iridium. This metal has the property of becoming slightly porous upon being heated and thereby lowering the vacuum in the tube.

Directions accompany each tube.

No. 3, price	\$12 50	No. 5, price	\$17 50
" 4, "	15 00	" 6, "	19 00

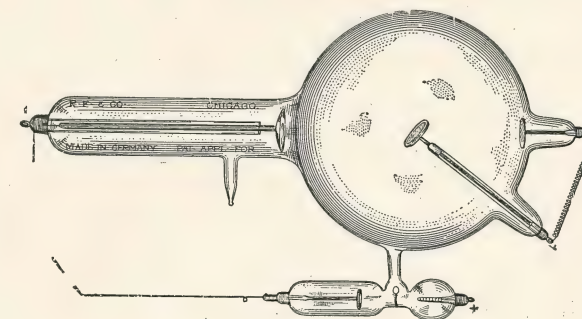


Fig. 10

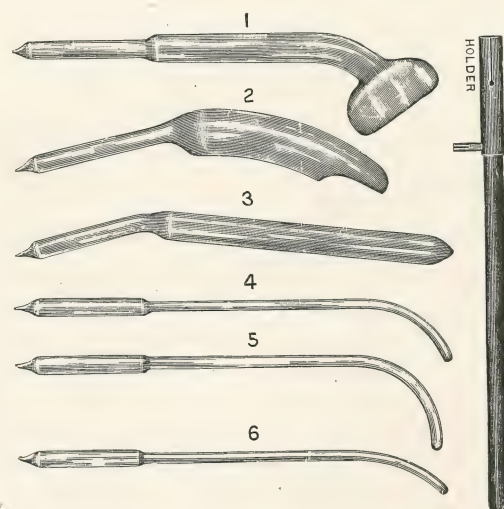
Fig. 10 shows the R. F. Universal regulating tube. This is the acme of instruments for producing X-radiance. By means of the auxiliary regulating attachment the vacuum may be raised or lowered in a few seconds, allowing the operator X-rays of any degree of penetration. May be used in Diagnosis Radiography or X-ray Therapy with equal efficiency. These tubes are of the highest art in glass blowing.

Vacuum Electrodes

For High Frequency Work

Patented October, 1901

Special shape set of Vacuum Electrodes designed by Dr. W. B. Snow



No. 11

THE shapes of these tubes are much improved upon, made of the proper thickness of glass, each one correctly curved for the cavity they are designed, and they can be used without fear of breaking in the cavity.

The small seal-off is now made on top of the handle, protected by a rubber cap cemented on and is less liable to puncture. The set contains the following tubes, one each for vaginal, rectum, throat, nose, urethra and general application, with a universal handle.

Set packed in box	\$5 00
Tubes separate,	75
Handle " "	75

Suggestions of Value in Purchasing a Roentgen Apparatus

IN installing a Roentgen Apparatus it is necessary to first investigate the kind of current possible to secure for operating the apparatus.

If you are fortunate enough to have 110 volt or 220 volt direct current from the city service the arrangements are very simple and the cost of installing the apparatus is considerable lower in price, and any form of interrupter may be used.

If only alternating current is procurable it may be used with a Wehnelt interrupter, as it is well adapted for diagnostic and Skiagraphic use as well as for treatments.

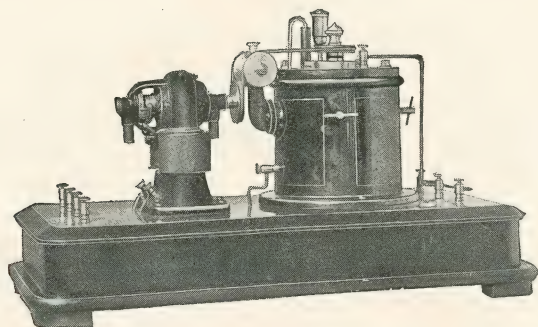
If you cannot secure city service direct current it becomes necessary to use storage batteries, providing there is a chance to charge them.

The best interrupter for this purpose is a rotary mercury interrupter, which with 25 cells of storage battery would insure first class results with a 12" coil. The batteries can be charged by a dynamo giving direct current, or in case this is impossible a small gas or gasoline engine can be used to drive a dynamo which will deliver the necessary current for charging.

To obtain the best results with alternating currents it is necessary to use a motor generator. This consists of an alternating current motor of the proper size which drives a direct current generator and supplies current at 110 volts to the coil. This method of operating a coil is also used for 500 volt direct current.

With regard to the size of coil which will give the best results we would not recommend using a coil of less than 12" for general purposes, and with larger coils quicker and better results may be obtained, because of the greater amount of reserve energy.

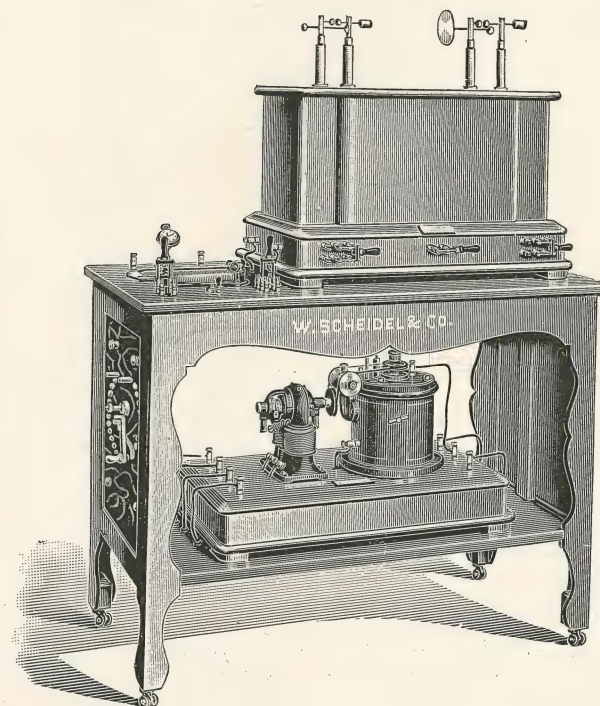
Mercury Turbine Interrupter



IN the above illustration we show the Mercury Turbine Interrupter, which is usually driven with a 110 volt motor, but it may be operated by an alternating current motor or by a battery motor. This interrupter may be used with all sizes of our coils or with other makes of coils where a turbine interrupter is desired.

For 110 volt	\$ 75 00
" 220 "	80 00
" 550 "	85 00
With Battery Motor (50 volt)	80 00
Primary Current can be Supplied by Batteries.	
With Alternating Motor (52 or 104 volt)	100 00

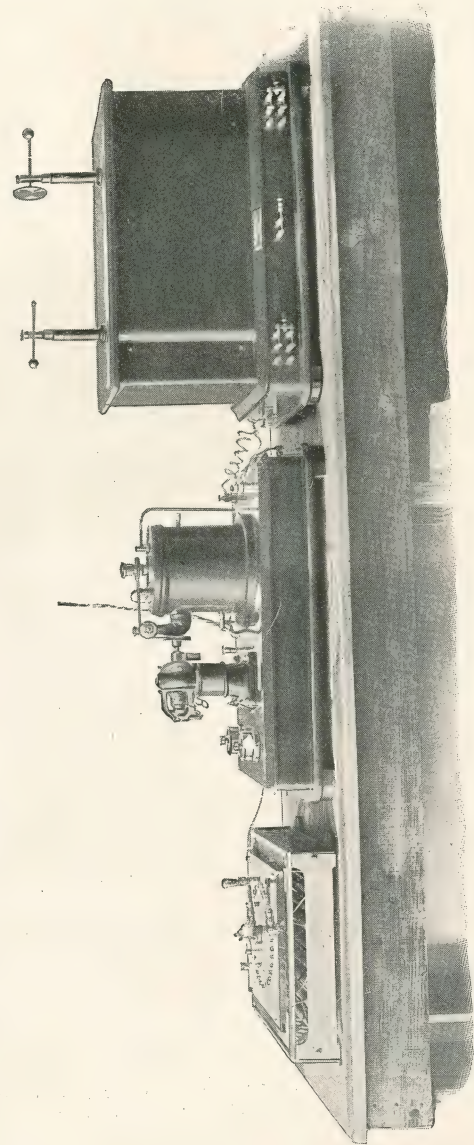
Scheidel's 12-inch D. C. Coil Turbine Interrupter and Table Switch Board



12-inch Equipment

One 12" Direct Current Coil	\$185 00
" Rotary Mercury Interrupter	75 00
" Rheostat	25 00
" Universal Tube Stand	12 50
" Mahogany Table	25 00
	<u>322 50</u>

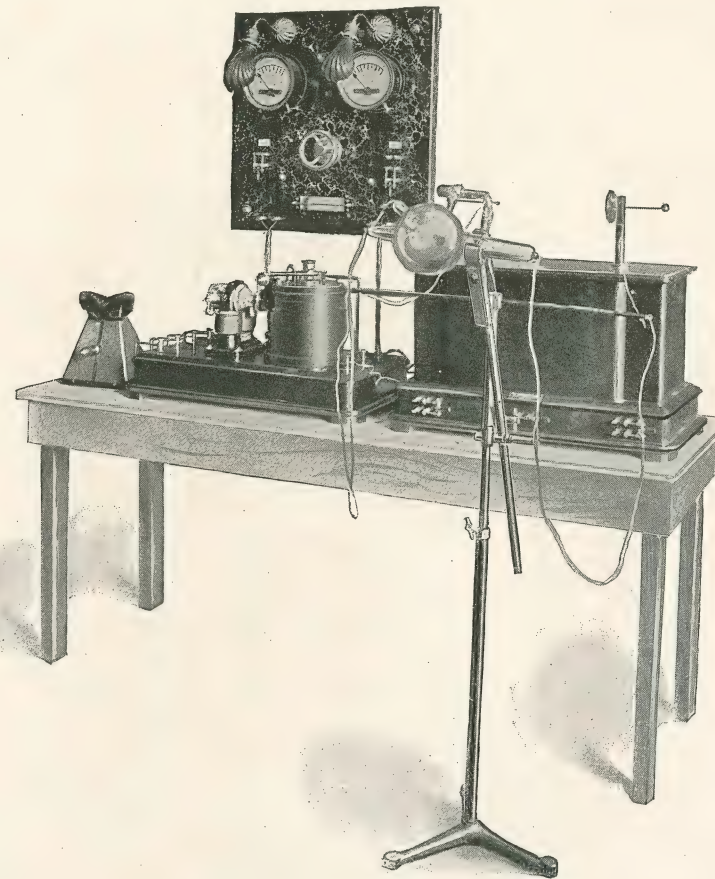
Scheidel Standard 12-inch Coil with Mercury Turbine Interrupter and Rheostat



\$297 50

Price complete as above

12-inch Coil with Turbine Interrupter and Wall Plate

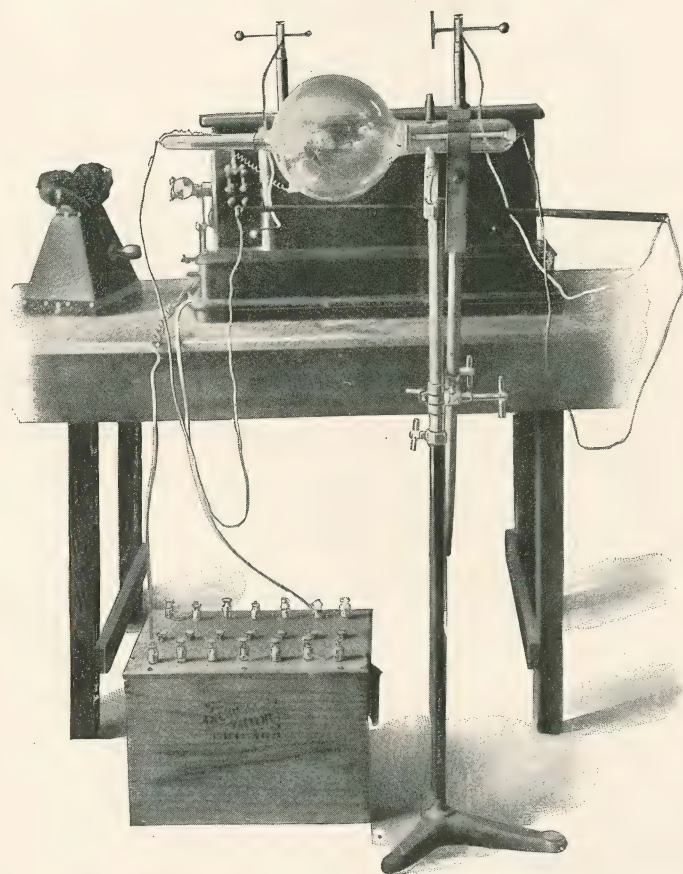


Wall Plate Equipment

One Marbelized Wall Plate Equipped with

One Volt Meter	
" Ammeter	
" Rheostat for Regulating Current in Primary	
" Rheostat for Regulating Number of Interruptions	
" Motor Switch	
" Pole Changing Main Switch	
" Split Second Timing Piece	
Two Incandescent Lamp Brackets with Green Porcelain Half Shades	
Necessary Connecting Posts	\$150 00
Complete 12" Equipment with Wall Plate or Table	422 50

Scheidel's 12-inch Portable Coil with Battery



12-inch Portable Outfit

One 12" Coil with Vibrator	\$200 00
" 14 Volt Storage Battery	75 00
" Tube Stand, Cords, and Instructions	12 50
	<u>287 50</u>

Price List of Scheidel X-Ray Apparatus

12-inch Equipment

One 12-in. Direct Current Coil	\$185 00
" Rotary Mercury Interrupter	75 00
" Rheostat	25 00
" Universal Tube Stand	12 50
Tubes and Fluoroscopes as per selection.	<u>\$297 50</u>

12-inch Alternating Current Equipment

See page 35.

One 12-in. Alternating Current Coil	\$150 00
" Rheostat	20 00
" Automatic Electrolytic Interrupter	10 00
Tube Stand, Tubes and Fluoroscopes as per selection.	<u>\$180 00</u>

Table Switch Board Equipment

One Mahogany Table equipped with	
One Volt Meter	
" Ammeter	
" Rheostat for Regulating Current in Primary	
" Rheostat for Regulating Number of Interruptions	
" Motor Switch	
" Pole Changing Main Switch	
" Split Second Timing Piece	
" Incandescent Lamp Bracket Equipped with Green Porcelain Half Shades	
Necessary Connecting Posts	<u>\$150 00</u>

Wall Plate Equipment

One Marbelized Wall Plate Equipped with	
One Volt Meter	
" Ammeter	
" Rheostat for Regulating Current in Primary	
" Rheostat for Regulating Number of Interruptions	
" Motor Switch	
" Pole Changing Main Switch	
" Split Second Timing Piece	
Two Incandescent Lamp Brackets Equipped with Green Porcelain Half Shades	
Necessary Connecting Posts	<u>\$150 00</u>
Complete 12-in. Equipment with Wall Plate or Table	<u>\$422 50</u>

Standard Coils Without Interrupters

8-in. Coil for Direct Current	\$100 00
10-in. " " " "	150 00
12-in. " " " "	185 00
12-in. " Alternating Current	150 00
12-in. " Alternating and Direct Current	185 00
14-in. " " " "	225 00
16-in. " " " "	300 00
18-in. " " " "	350 00
20-in. " " " "	400 00
22-in. " " " "	500 00
24-in. " " " "	600 00
26-in. " " " "	700 00
28-in. " " " "	800 00
30-in. " " " "	<u>900 00</u>

Wall Plate or Table Switchboard can be furnished with all sizes of Coils.
Estimates of Complete Equipment for Large Coils on application.

Price List of Scheidel X-Ray Apparatus

Continued

12-inch Portable Outfit

One 12-in. Coil with Vibrator	\$200 00
" 14 Volt Storage Battery	75 00
" Tube Stand, Cords, and Instructions	12 50
	\$287 50
Table for same	9 00

8-inch Portable Outfit

One 8 in. Coil with Vibrator	\$125 00
" 8 Volt Storage Battery	36 00
" Tube Stand, Cords, and Instructions	12 50
	\$173 50
Table for same	9 00

Mercurial Turbine Interrupter

For 110 Volt	\$75 00
" 220 "	80 00
" 550 "	85 00
With Battery Motor (50 volt)	80 00
Primary Current can be supplied by Batteries.	
With Alternating Motor (52 or 104 Volt)	100 00

Dip Interrupter

For 110 Volt direct current.	\$75 00
Same can be furnished for any Voltage.	

Equipment for Skin Treatment

One Special Wall Plate	\$150 00
" 12-in. Coil, Special Wound	245 00
" Dip Interrupter for 110 Volt Current	75 00
" Tube Stand	12 50
" 8 Cell Storage Battery	75 00
	\$557 50
Cords and accessories.	
Tubes and Fluoroscopes as per selection.	

High Frequency Outfits

One High Potential Condenser with Adjustable Spark Gaps	\$17 00
" High Frequency Coil	35 00
" Insulated Platform	6 00
" Set of Six Electrodes, such as, Body, Throat, Rectal, Curved Urethral, Straight Urethral, and Vaginal	16 00
One Foot Plate, and Hand Electrodes	1 00
	\$75 00

Cord, Cord Handle, and Instructions

One High Frequency Table	\$9 00
" High Frequency Electrode Board	1 00
" High Frequency Ozone Apparatus	6 00
Scheidel Electrolytic Interrupter	25 00
Schneider Automatic Interrupter	10 00
Universal Adjustable Tube Stand	12 50
Adjustable Tube Stand	9 00
" " " for Table	1 50

Fluoroscopes

Price List of Fluoroscopes with Platino-Cyanide of Barium Screens

5 x 3 inches size	\$ 6 50
5 x 7 inches size	10 00
6 x 8 inches size	12 50

Platino-Cyanide of Barium Screens

Size 5 x 7 inches, plain, unmounted, price	\$ 7 00
Size 6 x 8 " " " "	9 50
Size 10 x 14 " " " "	14 00

These screens are used for reinforcing the shadow in Radiography.

Cramer X-Ray Plates

Used by the most prominent experts throughout the United States and Canada. These plates are reliable, uniform in results and easy to manipulate. The same developer and fixing bath used for our BANNER or CROWN plates can also be used, but on account of their extreme sensitiveness, great caution must be exercised while handling and developing, by not exposing more than is actually necessary.

We have discontinued packing these plates in the paper envelopes, as the contact of paper affects the sensitized surface and injures their keeping qualities. We, therefore, furnish the envelopes separately, into which the plates can be readily inserted as required for use.

Special List per Dozen

We quote them with 2 and 12 sets of black and orange envelopes, but unless specified will send with 12 sets of envelopes.

Sizes	With 2 sets Envelopes	With 12 sets Envelopes	Doz. in Case
4 x 5	\$ 0 65	\$ 0 80	20
5 x 7	1 10	1 40	12
5 x 8	1 25	1 55	12
6 1/2 x 8 1/2	1 65	2 10	8
7 x 10	2 10	2 65	6
8 x 10	2 40	3 00	6
10 x 12	4 20	5 15	2
11 x 14	6 00	7 25	2
14 x 17	9 00	11 25	2
16 x 20	13 25	16 40	1 1/2
17 x 20	14 00	17 25	1 1/2
18 x 22	16 50	20 40	1 1/2
20 x 24	20 00	24 65	1

Packed 1/2 dozen in each box

Valuable Books for the Busy Practitioner

	Price Postpaid
Neiswanger's Electro-Therapeutical Practice.....	\$1 50
Hayes' Electricity, the Methods of its Employment in Removing Superfluous Hair, and Other Facial Blemishes	1 00
The Skin, Its Care and Treatment, According to the Michaud System. Cloth.....	1 50
International Text-Book of Medical Electro-Physics and Galvanism. Cloth.....	1 50
King, Electricity in Medicine and Surgery.....	3 50
Finsen—Oudin—D'Arsonval, High Frequency Currents.....	1 50
Massey, Conservative Gynecology and Electro-Therapeutics. Cloth....	3 50
Bigelow Massey, International System of Electro-Therapeutics. Cloth	6 00
Monell, The Treatment of Disease by Electric Currents. Extra Cloth	6 00
Monell's Elements of Correct Technique. Cloth.....	2 50
Monell, A System of Pictorial Instruction in X Ray Methods.....	15 00
Monell's Rudiments of Modern Medical Electricity.....	1 00
Morton's, The X Ray, or Photography of the Invisible. Cloth.....	75
Dowse, Treatment of Disease by Physical Methods.....	2 75
Rockwell, Sexual Neurasthenia.....	2 00
Rockwell, Medical and Surgical Uses of Electricity.....	5 00
Snow, Electro-Static Modes of Application	3 00
Williams, High Frequency Currents in the Treatment of Some Diseases. Cloth.....	2 75
Williams, Roentgen Rays in Medicine and Surgery.....	6 00

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Equipments

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