

**ILLUSTRATED SUPPLEMENT**

To the Fifth Edition of a

# **Lecture Course to Physicians**

*on*

**DIAGNOSIS by means of BIODYNAMICS  
PERCUSSION from a new standpoint  
SPINAL REFLEXOLOGY in simple form  
PHYSICAL THERAPEUTICS for practical men  
PRACTICAL POINTS for  
PROGRESSIVE PHYSICIANS  
ZONE THERAPY**

*By*

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Suppl.

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no. 1.

“If I can live  
To make some pale face brighter, and give  
A second lustre to some tear-dimmed eye,  
Or e’en impart  
One throb of comfort to an aching heart,  
Or cheer some wayward soul in passing by;  
If I can lend  
A strong hand to the fallen, or defend  
The right against a single envious strain,  
My life though bare  
Perhaps of much that seemeth dear and fair,  
To us on earth, will not have been in vain.”





## INTRODUCTION

Now that so many physicians are employing my method of Bio-Dynamo-Chromatic Diagnosis and Therapy, I have been continually receiving letters from them asking for additional data as to the technic.

Very many have asked me to publish an illustrated book showing all my new work. The expense of publishing new books is very great, and as a compromise I decided to publish an Illustrated Supplement to the Fifth Edition of my Lecture Course to Physicians.

This Supplement brings my work down to date and when bound with the Fifth Edition of my Lecture Course to Physicians will make the Sixth Edition of this Lecture Course.

Every edition of my Lecture Course has been written and published for my pupils only, but owing to the increasing demand for this work, **the Seventh Edition will be an illustrated textbook** covering all my work up to the time of its publication, and will be sold to any one interested in this work. It will probably be about two years before this Seventh Edition will be published.

To answer in a general way the many questions that have been asked as to how I discovered this work, I have added a brief history telling how my work has been evolved from a very simple and natural beginning.

Altho heretofore I have purposely refrained from saying anything in particular regarding aura or life emanations, in order to make this history complete, it seemed advisable to relate some of my work with this emanation of force.

To give my readers some idea of the vast amount of research work and experimenting that I have had to do to bring this method of Bio-Dynamo-Chromatic Diagnosis and Therapy to its present state of perfection, I have included in this work sketches showing many of the appliances and instruments that I have had to have specially made for proving out the work. These instruments and appliances have served to prove that my new work is not subjective, but that it is based on sound natural laws. They have been used for experimental work. For practical, every-day work an elaborate outfit is not essential as it can be done with a very simple outfit.

After spending over a hundred dollars for fotografs and retouching them, I had to discard them all because the detail that I wanted to particularly bring out would not show. It is for that reason that I have gone to the extra expense of having artists sketch figures depicting the various steps in the technic of the work, as well as showing in detail the various appliances and instruments that I use, most of which I have had to personally devise for the work. These sketches are not designed to be artistic, but are to give a working knowledge of the system.

To more fully illustrate all the new technic that I have developed in physical therapeutics, especially along the line of reflexes, I have included in this edition sketches showing many of the devices that I have found useful in general reflex work.

No matter how well you may have understood this new work, I would advise you to carefully peruse the following pages and study each sketch, and thus better learn the technic and the reason for it.

I am always glad to receive letters from my pupils and those who are employing my various methods, telling me of their failures as well as their successes. It is only by such cooperation that this system has been verified and improved. Failures show where the weak points are, and it is the weak points that have to be strengthened.

Natural physical methods in Diagnosis and Therapeutics must eventually take the place of other methods, because we are dealing with a natural force when we are dealing with man.

I want to thank those who have aided me in bringing this work to its present status.

I first have to thank my mother for the impetus and encouragement she gave me in my childhood and youth, in the study of natural phenomena.

Then come my old preceptors, Drs. Classon and Snow of Danbury, Conn., who did much to aid me in carrying on my experimental work.

Prof. Frederic R. Honey, formerly of Sheffield Scientific School, New Haven, and Trinity College, Hartford, also aided me greatly in my education in physics and mathematics.

Many others of the Faculty of Yale University and Columbia University did much to help me in securing my education.

Dr. Wm. Benham Snow and his estimable wife, Dr. Mary Arnold Snow, gave me many ideas in Physical Therapy that have been of ever increasing value to me.

Prof. Louis Heitzmann of New York City taught me many new facts regarding the use of the microscope in the diagnosis of disease.

Miss Beatrice Irwin of London, England, author of "The New Science of Color," and many other works, I want to especially thank for helpful suggestions in Chromatics.

Prof. Calvin S. Page, author of "The New Physical Philosophy" or "New Physical Science," has given me many helpful suggestions.

Walter J. Kilner, author of "The Human Atmosphere," and Arthur E. Baines, former editor of the Electrical Engineer, both of London, England, have aided me materially in my work.

William H. FitzGerald, M.D. of Hartford, Conn., personally taught me his system of Zone Therapy and gave me many valuable suggestions.

I also want to especially thank Edwin F. Bowers, M.D., of New York City, the trained writer and medical critic, for his exacting analysis of my work. He was one of the critics who could not believe that my method of diagnosis was based on physical laws until patients were taken into a dark room for me to diagnose by the magnetic meridian test and air-column percussion. Inasmuch as all the diagnoses were checked up by other methods and proved true, the testimony of this critic has been of great value to me.

Several Chambers of Commerce, especially that of Paterson, N. J., have aided me in my work by referring me to various manufacturers as well as experts in weaving and dyeing of textiles.

I also want to heartily thank my many physician pupils thruout the country for their helpful assistance in sending me reports and suggestions regarding my work.

Last but not least, I want to thank my assistants who have worked untiringly with me in perfecting the system.

George Starr White.

## NOTICE

The pages of this Edition begin where the pages of the Fifth Edition of my Lecture Course to Physicians end.

The pages mentioned in the text refer to the pages of the Fifth Edition.

## ERRATA IN FIFTH EDITION

- p. 114 17th line from top should read, **prolonged** stimulation
- p. 170 6th line from bottom should read, **effects**
- p. 280t under head of Binocular Electro-Therapy 6th line from top should read **ten** minutes instead of two minutes.
- p. 287 12th line from top should read **cuspid** instead of bi-cuspid and the next line should read **cuspid** instead of canine
- p. 294 first line at top of page should read **cuspid** instead of bicuspid
- p. 20 21st and 22d lines from top should read, The distance is about 24,000 miles **going and returning**, and the flight is made every autumn.
- p. 40 under the head of Summary
  - No. 7 should read, All emotions appear to be **rates or modes** of vibration, temporarily changing the individual's normal rate or mode of vibration.
  - Nos. 8, 9, 22, 23 should read, **sympathetic and vagal systems**



## HISTORICAL SKETCH OF MY DISCOVERY OF THE BIO-DYNAMO-CHROMATIC METHOD OF DIAGNOSIS

So great is the fear among scientists that they may tread in unknown paths or that they will step aside from old and recognized philosophy, that some of the greatest natural truths are hidden from those who could make the best use of them. It is to be hoped that the time will come when scientific minds will be more open to receive new philosophies, even tho they are not **all** well founded. Ultra-conservatism is a barrier to progress. However, "truth cannot be held down by authority."

It is a noteworthy fact that no new philosophies, theories, or innovations in science, have ever been recognized by the rank and file of scientists until the discoverer had been anathematized and abused and his discovery questioned and ridiculed.

The practice of medicine has been no exception to this custom. Hippocrates, Galen, Harvey, were all told their discoveries were impossible. Semmelweis, who gave antisepsis to the world, was clubbed into his grave, altho afterward a monument was built to his memory. Simpson, Morton, Wells, the discoverers of anasthesia, were ridiculed and abused. The well-known saying that to be free from criticism one must say nothing, do nothing, and be nothing, applies as much or more to medicine than to any other line of scientific work. This state of affairs must eventually change, but "the secret of reform lies not in revolution but in evolution—in unfolding along the axis of growth."

A philosopher in exploring the unseen first sees it on the horizon, much as the sailor at the masthead spies the distant land.

"To reach knowledge by 'pure reason' is as impossible as to reach the sun with a stepladder."

To acquire knowledge without study is like learning to speak French from a traveler's guide book.

To cultivate a technic without practice is like learning to swim without water.

"While theory is aimless and impotent without experi-

mental check, experiment is dead without some theory passing beyond the limits of ascertained knowledge to control it. Here, as in all parts of natural knowledge, the immediate presumption is strongly in favor of the simplest hypothesis; the main support, the unfailing clue, of physical science is the principle that, nature being a rational **cosmos**, phenomena are related on the whole in the manner that conceptual reason would anticipate."

"First comes hypothesis, then the accumulation of data, and finally, when all available evidence is in, rejection and the adoption of fresh hypothesis, or modification, or verification."

"A bundle of disconnected facts is only the raw material for an investigation; their mere collection is the very earliest stage in the process; and even while collecting them there is nearly always some system, some place, some idea under trial."

So my work is the culmination of long years of investigation, experimentation, and application. Now I am able to demonstrate in minutes what it took me years to work out. This system is a system that every progressive physician should understand and be able to employ, but without application it cannot be learned any more than microscopy, astronomy, or any other science.

That the subject is a broad and interesting one, there is no doubt; and its possibilities are limitless. Nature in her own laboratory has provided us with every means for diagnosing, curing, and even preventing disease, if we only knew how to interpret her.

"The man who really grows great is not the man who thinks he knows it all, but the one who never forgets that each day reveals a new force, a new method. It is the man who feels the need of learning more, and is open to new convictions."

## Early Observations

My observations of physical phenomena date back to my boyhood. In 1876, while watching a flock of wild pigeons (*ectopistes migratorius*, now extinct) an old trapper and hunter called my attention to the fact that these birds "knew the

points of the compass." To prove this, he liberated a few birds from his snares. They flew straight up in the air, made a few turns, and then "made a bee line" for their homing places. This experiment made such an impression on my mind that I made it a practice to observe all birds and animals to see if they "knew the points of the compass." I searched books on the subject, and incidentally delved into physics.

In 1882 when I began the study of medicine, I talked with my preceptor regarding my observations. Being interested in nature study, he encouraged me to carry on my investigations with the result that part of his offices was turned into an aquarium and aviary to make room for my collections.

My study of carrier-pigeons showed that they made flights by night as well as by day. This seemed to prove that the magnetic fields of the earth influenced a "natural magnetic tendency" in animal life. One day I found a carrier-pigeon that could not orient itself. It was sick and died. I examined it and found a condition that I now know was tuberculous. My preceptor said he thought "weakness had changed the bird's emanations" in such a manner that the earth's magnetic fields could not be correctly "reported" to the brain.

Little by little I learned that the magnetic fields of the earth influenced very many different living beings. I then began to experiment to see if the same were true of human beings. I tested people with their eyes covered, to see if they knew in which direction they were facing, and found many who did.

Later it was my good fortune to have a very learned preceptor who had spent years in India. He was a keen observer of natural phenomena and had learned much from the Hindus and other oriental people. He said he had often noticed the faculty of orientation in the savages and in many animals of the jungles. He said the Hindus had taught him that there were life emanations in humans, and that they were able to demonstrate this when two or more persons stood about thirty-six inches apart. He reasoned that all living beings gave off vibrations of energy and that the magnetic fields of the earth probably influenced these emanations of "life force," "vital force," "life emanations," "aura," or whatever they might be named.

## **Study of Aura or Vital Force**

From my earliest recollection I have been able to observe aura or what some call "life atmosphere" in living beings and in the living vegetable kingdom. My first recollection of this faculty, which I then supposed every person possessed, was when watching a cat. I made the remark to some of my playmates that the cat looked "bluer" that day than common. Just then a dog came up to tease the cat and I noticed the aura changed color and took on a "reddish hue." Later I noticed my pet pigeons. In the mating season the color of the aura of the male was changed and when the pigeons were "making love" to each other I could distinctly observe a change in the color of their aura.

When watching the budding trees or plants, I always noticed a distinct aura about the budding part of the plant which I did not observe when the budding process was not going on.

I often diagnosed diseases for my preceptors in the early days of my medical study by simply noticing the different color of the aura over the diseased areas. As very few people have the faculty of observing aura, it was my constant aim to find some less subjective method of diagnosing.

## **Dead Material has no Aura or Vital Force**

In 1904 I made arrangements with the dissecting room manager of one of the large eastern medical institutions to spend more or less time every week studying cadavers as they were brought from the morgue. I would find the cause of death from the certificate and then see if I could detect any aura, or if I could conduct energy from these dead persons. Altho I spent very many hours in the "dead house" and examined scores of cadavers, I was never able to observe an aura from a dead body. Neither was I able to conduct energy that would indicate the disease from which the person died. For instance, I have taken cancerous breasts, tuberculous lungs, etc., and have tried to conduct the energy from these various diseased organs. In every instance the energy would be the same as the atmosphere in which the organs were placed, or the same as comes from decaying material.



I conducted these experiments for the reason that some investigators had told me that a person who had died from tuberculosis gave off a different energy than one who had died from syphilis, etc.

While the body is living, the energy is different, but when the body is dead I have never been able to obtain any vital force or aura from it.

We must bear in mind that nearly the entire body of any animal is organic material, and organic material of any kind when dead and fermentation has ceased, gives off energy the same as the atmosphere in which it is placed.

### **Disease Changes Electrical Resistance of Tissues**

One phenomenon I have noticed and perhaps that is what has confused many investigators—that is, the resistance of diseased tissue. If an electric current is passed thru any tissue showing fibrous degeneration, its resistance is greater than if affected with a colloidal degeneration. In other words, the resistance varies with the condition of the tissue whether it is normal or abnormal, as well as from many other factors.

I have also observed that the mental condition of a person will many times alter the resistance of the skin.

### **Conduction of Energy**

In 1876 I took two tin boxes, knocked the bottom out of each, and in place of the tin bottom, bound on a piece of an old drum-head. (See Fig. 1). I pierced the center of these drum-heads and thru them passed a fishline and tied a wooden button to the ends of the fishline. I used this device as a telephone, and by properly hanging the cord I could talk with my comrades many yards away. I tried taking a wet cloth and soaking the cord to see if it would carry the voice any better. I then asked one of my companions to put a cat at one end of the box to see if I could hear it purr. When I put the end I held to my ear, I noticed what I thought was a "breeze." I noticed this "breeze" before I heard the purr of the cat. This struck me as rather peculiar and I had my companion try again putting the cat up, but with its side to the receiving end of the crude transmitter. I did not feel the

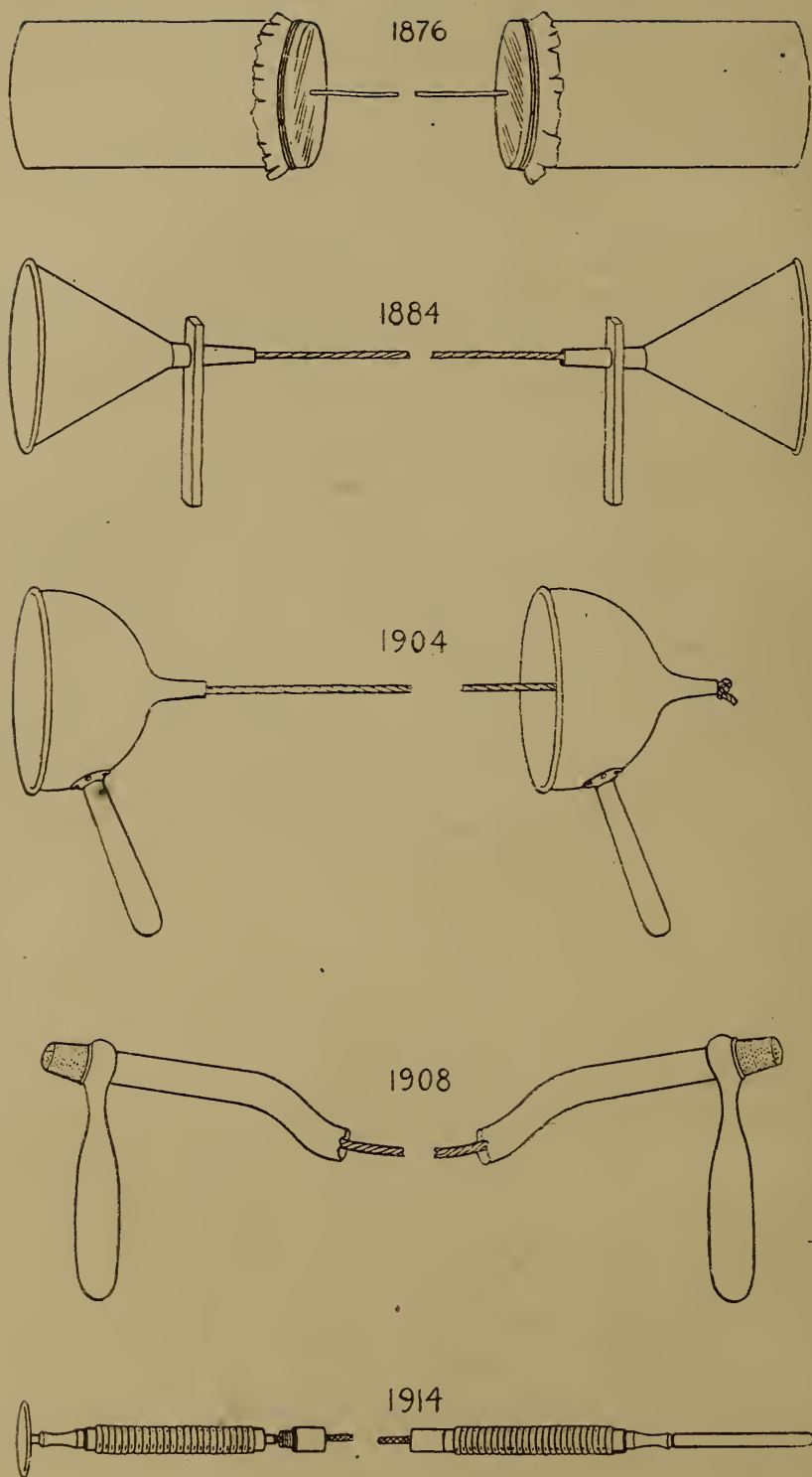


Fig. 1

Evolution of my Energy Conductor

“breeze” the same as I did when the cat’s nose was put into the transmitting box. I asked the boy to point his finger into the box to see if I could feel the “breeze” from his finger, and I did feel it altho the boxes were several yards apart. Since that time I have frequently demonstrated the fact that the energy from one animal or person will influence the energy of another.

In 1884 I constructed another kind of energy or aura conductor. (See Fig. 1). This was made by taking two metal funnels and passing a cord into their outlets and fastening these cords to buttons so they would not pull out. For this apparatus I used a much heavier cord than I used in my crude telefones of years before. I found when this small rope was dry I could get no “breeze” when I was trying to carry the energy from one person to another, but when it was soaked with water I was able to easily conduct the energy or aura.

At that time I also discovered many peculiar phenomena regarding the conduction of energy from one person to another. (I have been told that the Hindus have for centuries been able to conduct energy very long distances from one animal to another.)

My next change in aura or energy conductors was made in 1904 as shown in Fig. 1. These conductors I made a little nicer and fastened two bottle-filling funnels to a cord having the receiving end of one funnel pointing so as to be a receiving terminal and the outlet end of the other funnel being so placed that it would be a dispersing terminal. By wetting the cord I found I could very readily carry energy or aura from one person to another or from one part of the same person to another part, thereby causing a “denting” of the aura at the dispersing terminal. This “denting” of aura has a similar appearance to blowing into a column of smoke. This phenomenon is plainly demonstrated when taking the aura from the fingers and transmitting it to the aura from the armpit.

So far my aura or energy conductors were made in a rough manner and I constructed them myself. I devised many other styles but those illustrated in Fig. 1, will give a general idea of the evolution of this work.

In 1908 I had VanHouten & TenBroeck of New York City make me some solid rubber handles and drill them out as shown in Fig. 1. It will be noticed that these holes were drilled on a slant so the tubing would not bend at too great an angle. In the holes in these rubber handles I closely fitted a rubber tube, this tube at first being about six feet long. Thru this tube I passed a big cord and tied a knot at each end. For no other reason than to make it look shipshape and complete, I put aluminum thimbles over these knots, as shown in the illustration. By soaking the cord or rope with water I was able to conduct energy from one person to another or from one part of a person to another part with great facility. While doing these experiments, I tried twisting wire around this piece of rope and found that facilitated the work. Later I used a very large copper wire such as is used in the electric power stations, and passed that thru the rubber tubing. I found that conducted energy better than anything else, but it was not practical. A good sized copper wire thru a flexible rubber tube I found to be the best. Whether the aluminum thimbles at the end aided in conducting this energy, I did not know at that time.

At this same time I first used wet rattan, willow, or bamboo for conducting energy, and found that these materials, when thoroly soaked with water, made extremely good conductors, provided dry handles were put on them so as to insulate them.

I experimented on animals of various species and found that I could conduct energy from a cat, dog, fowl, etc.; and that energy so conducted would deflect the "streamers," or life emanations from a human.

I continually improved on these aura or energy conductors, and in 1914 I constructed the energy or aura conductor shown in Fig. 1. It will be noticed that I constructed these handles so that the metal tip of the battery cord would not touch the hand. It will also be noticed in the energy conductors of 1908 that I made them so that metal would not touch the hand; and so the hand would be at right angles to the receiving and dispersing terminals. I did this for the reason that I had found that if the hand were pointed in the



same direction as the conductor I could not tell whether the energy came from the hand or from the end of the conductor.

In my earlier models I used ordinary dry wood for the handles but in 1908 I used the polished rubber handles. I found that I could pass wet bamboo or rattan thru this rubber tubing and conduct the energy or aura better than without the tubing. The form of the aura or energy conductor made in 1914 in some ways was an improvement and in other ways it was not, as the handles were parallel with the metal terminals.

In an extensive series of experiments with extremely sensitive galvanometers, I found that aluminum gave to aura or energy passed thru it a different polarity than any of the other ordinary metals; and as many of the wire terminals were nickel-plated and many were not, I found it was obligatory that the same kind of metal was on both ends of the aura or energy conductors. As I had previously used aluminum (using aluminum funnels as soon as they were put on the market), and as aluminum seemed to be light and an easy metal to handle, I made the terminals of aluminum.

After a long series of experiments with the various metal terminals, I found that any good conducting material, such as copper or brass, would do as well for the terminals, provided they were kept bright. When they were oxidized they did not act as well. Therefore I concluded that aluminum was the most practical and best for terminals. I formerly thought that these terminals helped to augment the energy given off, but now I am not satisfied that they do.

The larger the area of the conducting material, the easier is the energy carried thru. This same law applies to the conduction of electrical energy.

In my experiments I found that the terminals of these conductors should not **both** touch the skin, for the reason that the energy would be carried in either direction according to which terminal received the greater energy. The same principle applies to energies of all kinds—the greater energy will deflect or influence the lesser energy.

After all these years of building energy conductors, the culmination was in the energy conductor of 1916, which is illustrated in Fig. 2. It will be noticed that the receiving or



Fig. 2—Pole Differentiating Energy Conductor of 1916. *M* is a small bar magnet. *N* and *S* are the North and South pole respectively. *C* is an aluminum shell in which the bar magnet is kept. *A* is the dispersing or subject terminal. *B* is the receiving or patient-terminal. *D* is a battery cord.

patient terminal is a rod of aluminum placed in a polished hard wood handle, or a rubber handle, so that the hand will not touch any of the metal; and the dispersing or subject terminal is a revolving piece of aluminum so arranged that it points at right angles to the hand holding it. For convenience sake, I now use ordinary battery cord for the energy conductors. A large size copper or aluminum wire thru a rubber tube is much better, altho it is not practical for ordinary use. Battery cord meets the ordinary requirements.

In this 1916 model, a magnet is encased in an aluminum shell for detecting "polarity." This magnet has a deflecting power of about six inches when used at right angles to a three-inch compass needle. As will be explained later, I have found that radiant colors are far more reliable for dissipating energies than a magnet, altho a small magnet can be used in many instances, especially for detecting "polarities" of fruit, vegetables, etc.

### **Conducting Vital Force without Conductors**

Altho I have not had time to perfect the apparatus for "wireless" conduction of Vital Force, or energy, yet it might be of interest to my readers to know that I have been able to do so on several occasions.

Just what the limit of space will be I do not know, but by employing specially made apparatus of great sensitiveness and condensers of a special type, I can conduct energy without wires comparatively long distances.

With wires and special condensers vital force can be conducted great distances—perhaps around the globe.

### **Air Column Vibration**

As time went by, I experimented with vibrating columns of air, and would often vibrate a column of air over a person's face or body. At times I observed a variation of pitch when vibrating a column of air over a person, altho my devices were the same distance from the body each time. I found that the variations of pitch took place when the individual changed position as regards the points of the compass. For example, when the person faced east, I observed one



note; and when he faced north, I observed another note. At last the dream of my boyhood was realized—I was able to **prove** that the magnetic meridian **did** affect the living body in some way.

(In 1908, while giving demonstrations of the aura, human energy, or life emanations, I observed that the “streamers” or radiations from the body were deflected when some subjects faced north or south in a different way than when they faced east or west.)

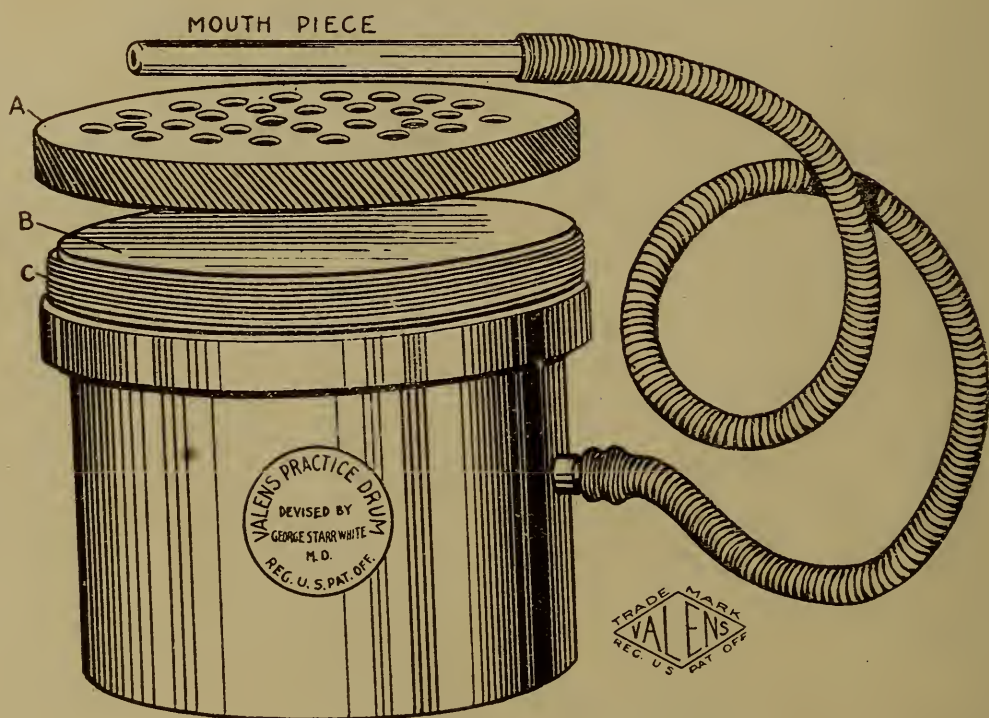


Fig. 3—Valens Practice Drum made of aluminum. *A*, perforated screw top. *B*, specially made Vellum. *C*, screw-threads for top.

Step by step I developed the technic of air-column vibration and devised various instruments to prove that the magnetic meridian changed the tension of the blood vessels in the living body. I noticed that the change of tension of a drum head changed the pitch of an air-column vibrated over it, similar to the change noticed in a column of air vibrated over the body as it turned from east or west, to north or south. From this observation, I was able to construct special drums on which to demonstrate the work. These drum-like devices I call “practice drums.” (Fig. 3.)



After having examined very many persons to see how the magnetic meridian affected them, I found that I must learn **why** it would influence some, and not all. By carefully collecting data and making comparisons, I found that only "healthy" individuals gave the change (which I now call the sympathetic-vagal reflex VR) while they faced parallel with the magnetic meridian (MM), that is, north or south.



Fig. 4—Vibrating air thru a wooden pipe over the body.

Among the first I found, who would show no change when facing in the magnetic meridian, was a lady who had tuberculosis fairly well advanced. Later I found that syphilis had the same power of inhibiting the effects of the magnetic meridian upon the body.

In December, 1908, I conducted a series of experiments with vibrating air columns thru wooden pipes. (See Fig. 4.) I had a healthy looking patient over whose body I

could notice no change of pitch while sounding an organ pipe—no matter in what direction he faced. I observed an aura of a reddish hue emanating from the back of his head. This same color I had previously noticed in syphilitic persons, being especially well defined over localized lesions. From these findings I diagnosed the case as syphilitic gumma located in the cerebellum.

As this young man's relatives would not believe my diagnosis, especially from the way I had diagnosed the case, I offered to pay for the services of an expert diagnostician, provided his diagnosis were not the same as mine. Accordingly, he was sent to Dr. George F. Laidlaw of New York City and his diagnosis coincided with mine. The young man died of syphilitic tumor in the cerebellum.

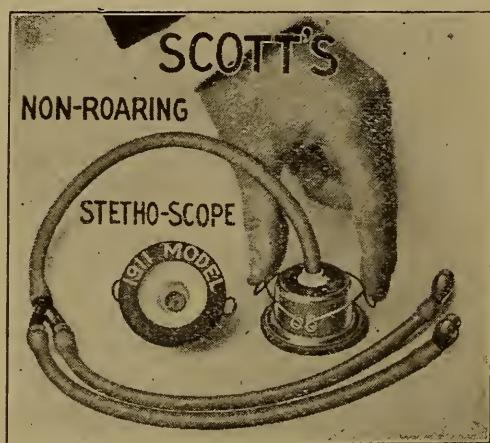


Fig. 5—Invented and made by Dr. Walter E. Scott of Adel, Iowa.

Later a young lady came to me to be treated for "cancer of the breast." I tested this lady with my organ pipes, or column-sounding tubes (See Fig. 4), and obtained a decided change of pitch as she turned from one point of the compass to another. I also observed that the color of the aura from her breasts was normal, that is, steel blue instead of a blue violet which is the aura color of cancer. I therefore diagnosed her case as a benign adenomatous enlargement of the breast. I treated the breast with the big light for a few weeks and it was cured and has remained cured.

(The color of the aura from a well defined tuberculous lesion is of an indigo blue.)

## Vibrations of Tissue—Animate and Inanimate

Because of the general ignorance of the manifestation of vital force, pseudo-scientists and imposters often try to delude the public for mercenary reasons.

By means of a specially constructed stethoscope, which is illustrated in Figs. 5 and 6, we can easily prove that muscular tension in the fingers produces an audible tone.

By placing a wire around a twig or small branch of a tree and attaching the other end of the wire to this stethoscope terminal, or localizer, the vibrations of the fibers in the twig or limb can be made audible. These vibrations are easily made by forcibly bending or twisting the twig or limb. It is

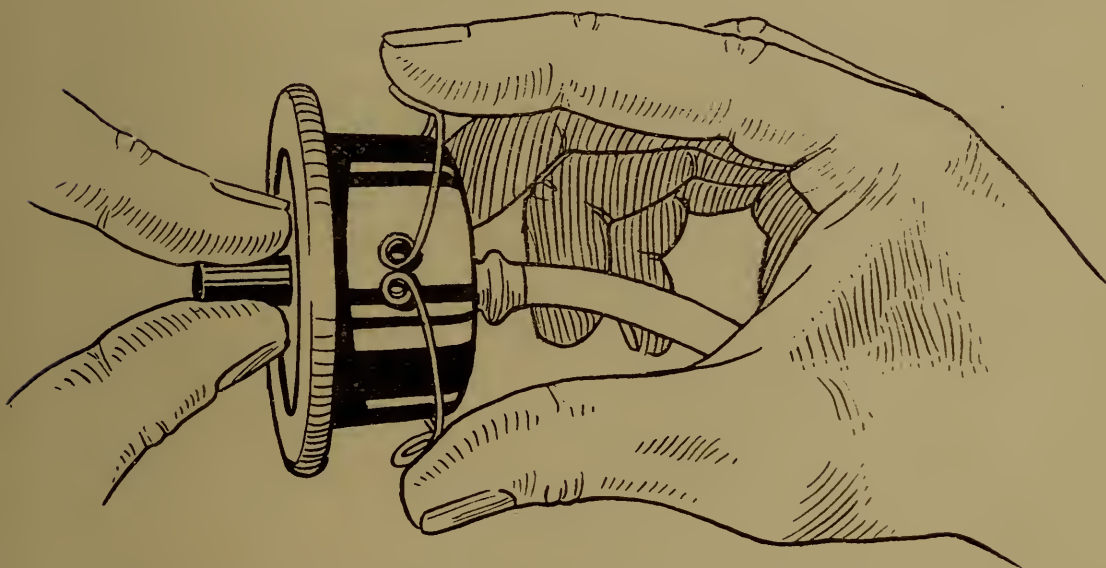


Fig. 6—Demonstrating "Muscle Roar" by means of Scott's "Non-Roaring" Stethoscope

nothing but a physical phenomenon of the vibration of fibers under tension. When this is done thru a magnifying sound device, the sound can be likened to the "groaning of the branches."

Knowing this physical fact, one imposter, in particular, announced that he could prove that plants or trees suffered pain and that they would "cry out in pain" under certain conditions. This demonstration, along with many others which he claimed were outside of the physical realm, he gave in New York City, in 1911. I was present at one of his demonstra-



tions and broke up the meeting by going on the platform and explaining how he did all his tricks. Within a few days he was obliged to leave the city. As the New York newspapers recorded this occurrence, perhaps some of my readers recollect the incident.

If this imposter had attached his wire to a living plant, it might have seemed a little more plausible. From our conception of the word, "dead," a limb cut off from a living body is dead and a limb cut off from a living tree is dead. To say that a limb from the body of an animal or from a tree can "suffer pain" after it has been taken from its body is absurd.

### **Colors to Diagnose Disease (Bio-Dynamo-Chromatic Diagnosis)**

Now came the time when I could put into use much that I had learned of physics. I reasoned that as the aura or "life emanations" from a healthy body were deflected by the magnetic meridian, and that as the tension of the body organs was changed by the same agency, then some other energy must be able to act on the "animal energy" or "life force."

After trying sound waves of all kinds, I began to work with colors. The first color I used was the ruby employed in my fotografic dark room. This I found obliterated the effect of the magnetic meridian on a healthy subject; and it would also enable the magnetic meridian to act upon one suffering with tuberculosis the same as if he were healthy. Many persons gave this "ruby reflex" when they complained only of being tired, nervous, etc.; and later it was found they had tuberculosis. I also found that a person with cancer gave this "ruby reflex." Altho I have tested over three thousand cases with the ruby light, I have found no diseases except tuberculosis and cancer that would respond to that color. Later I discovered a color that would differentiate cancer from tuberculosis. I employed every color I could find or make, and eventually found that orange and ruby combined would elicit the reflex in either advanced tuberculosis or carcinoma better than ruby alone, when the patient was facing in the magnetic meridian. No other colors will do it.

Various tints of the same color show the exact stage of the disease.

I found that tuberculosis could be diagnosed by this method at the very inception of the disease, and before a diagnosis could be made by any other known method. Time would prove that the diagnosis was correct, and the patient could have been more readily cured had others believed my findings were reliable.

By degrees I found that other radiant colors would enable me to diagnose other diseases, until now I have a well defined plan of diagnosing the most prevalent and the most dangerous toxemias. This method I have termed the **Bio-Dynamo-Chromatic Method**. (Bios, meaning life; Dynamis, meaning force; Chroma, meaning color.)

I have never yet found a person suffering with any malignant disease, who would give this reflex when facing from east or west to north or south, unless some radiant color were employed. This reflex I term the **sympathetic-vagal reflex**, (VR) or the **magnetic-meridian-sympathetic-vagal reflex**. (MM VR.)

After sufficient time had elapsed, and experiments enough had been made to verify my work and fortify it against the criticisms of scientists, I explained it to my friends. Gradually, progressive physicians are learning and adopting this method of diagnosis. They report findings the same as mine.

### Explanation of the MM VR

I am often asked by scientists and physicians for an explanation as to why the magnetic meridian affects the body more when it is facing north or south than when it is facing east or west. The following physical facts may help to answer this question:

**Energy** is known only by its manifestations.

The **magnetic meridian energy** must be a rate or mode of motion or it would not affect the magnetic needle.

The **magnetic needle** gives off a rate or mode of motion.

**Every rate or mode of motion** affects every other rate or mode of motion.

All **nervous energy** is a rate or mode of motion.

A **nervous stimulus** or excitation is a temporary change in nervous energy.

A reflex is an involuntary movement characterized by a temporary change in a rate or mode of motion without the necessary intervention of consciousness.

In stepping up magnetism into electrical energy, the electrical potential is increased in direct proportion to the lines of magnetism that are cut.

The **sympathetic ganglia** are placed in the posterior part of the torso anterior to the spinal column. The ramifications from the sympathetic ganglia are lateral. Therefore they present a great deal more surface antero-posteriorly than they do laterally. A glance at a drawing of the great nerve ganglia will make this clear.

When the body is facing east or west the magnetic meridian energy cuts relatively only a very few lines of force from the great nerve ganglia and their axons; but when the body is facing in the magnetic meridian, that is, north or south, the energy from the magnetic meridian cuts infinitely more lines of force and in so doing steps up the energy, thus producing a reflex.

This explanation seems very consistent when we consider the fact that **all forms of energy are related** and it is easy to step one energy up or down into another form. For example, mechanical motion is stepped up into electricity; electricity is stepped down into heat; heat is stepped up into light which, when applied to the growing plant, is stepped up into the vital manifestation of growth, nutrition and reproduction. (See pages 11, 12, 13.)

### **Can the X-Ray demonstrate the MM VR?**

This question is often asked. Let me reply to this interrogation as I do in class work.

What is the X-Ray? It is a rate or mode of motion.

What effect has one rate or mode of motion on another rate or mode of motion? One changes the other.

What effect then must the X-Ray have on the animal organism?

**The X-Ray will elicit the VR.**

Consequently, if the X-Ray will elicit the VR, it cannot demonstrate the VR elicited by the magnetic meridian (the

MM VR) because, if two different energies will produce the same result separately, when both are used simultaneously one cannot be used for detecting the other.

**If the X-Ray ever demonstrates a reflex, it cannot be the sympathetic-vagal reflex.**

### **Bio-Dynamo-Chromatic Therapy**

Following the law of similars, I have developed a system of therapy in accordance with the color findings in the diagnosis. For example, if ruby is required to elicit the sympathetic-vagal reflex in an individual, that color I use **intermittently** for the treatment, while the patient is grounded and facing exactly north or south in a dark room (Fig. 71). The technic for carrying out this work must be exact; and the clinical proofs of the value of this method of therapy are so convincing that there need be no speculation as to its efficiency.

I believe this phase of the **law of similars** is as true as gravitation or any other natural law; but one must know and understand the laws governing it, the same as they would every other physical phenomenon.

Like other natural laws, this Magnetic-Meridian Law is so simple that anyone can demonstrate it to his satisfaction without the use of elaborate and expensive instruments; and there is a scientific explanation of it all.

The far-reaching effect that this law has on humanity cannot be expressed in words. The fact that it enables the physician to diagnose tuberculosis, cancer, syphilis, etc., at their very inception, gives him an opportunity to act at the most propitious time and in the most propitious manner.



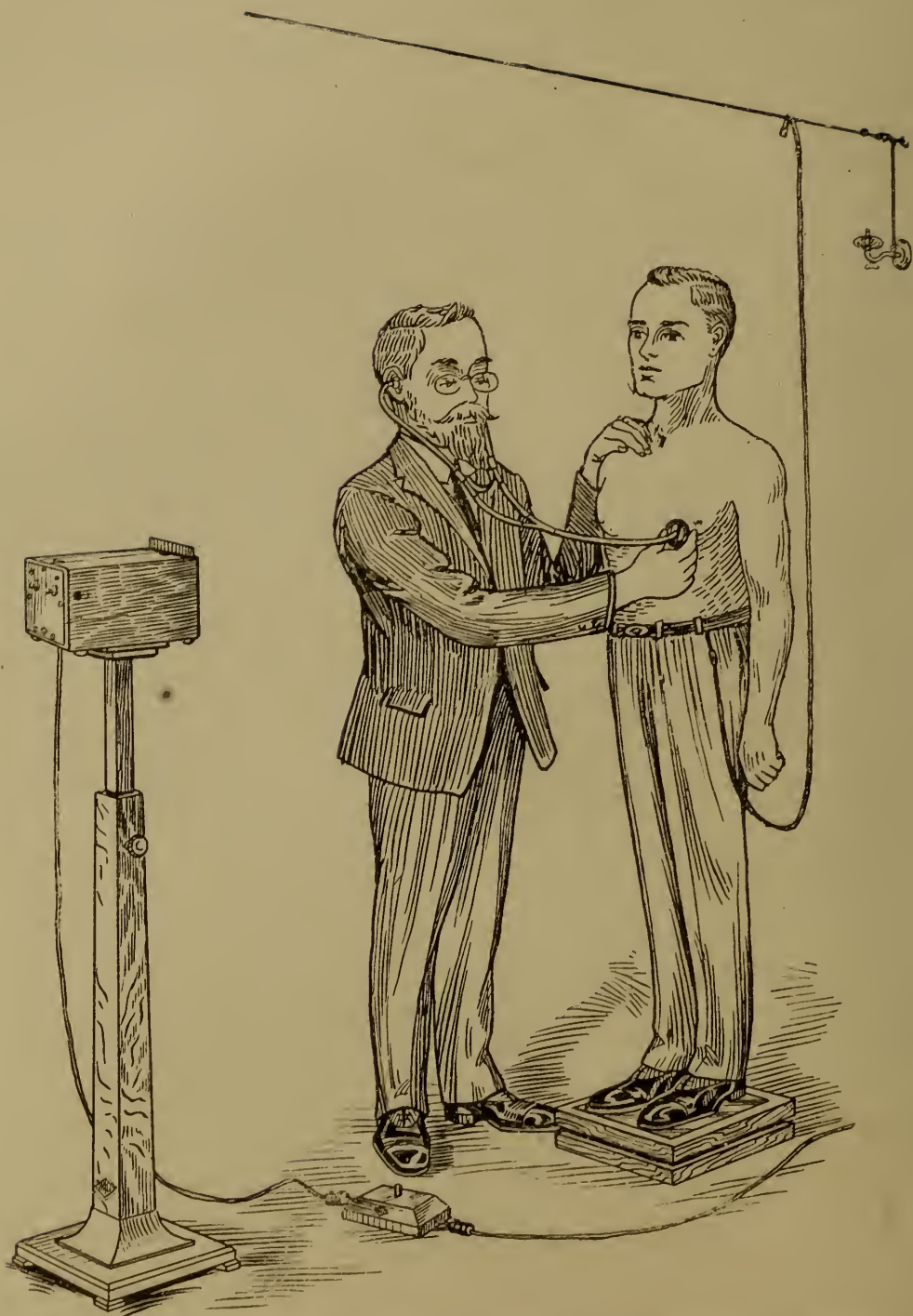


Fig. 6A—Showing how the Scott's Non-Roaring Stethoscope can be used to demonstrate the Elicitation of the MM VR



## POLARITY

On page 7 is mentioned the fact that I use electrical terms in describing Biodynamics as there seems to be no better nomenclature at present. Nevertheless, little by little I am getting away from using the word "polarity" by expressing it as "rate or mode of motion."

To illustrate how the term, "polarity," is misleading and not at all broad enuf for Biodynamic work, I have graphically shown in Fig. 7 how different rates or modes of vibration may be **toward** the opposite pole but still have an entirely different rate or mode of vibration, as proved by the fact that one radiant energy would neutralize the one condition and not the other.

**T** and **C** stand respectively for tuberculosis and carcinoma and they are at the plus end of the line. **S** and **G** stand for syphilis and gonorrhea and they are at the minus end of

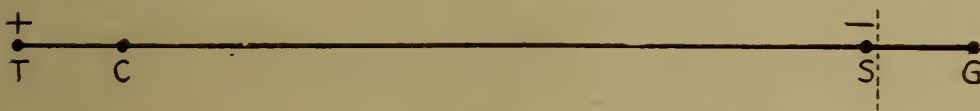


Fig. 7—Graphically showing how "Polarity," as understood in physics, is not applicable to Vital Force, as there are limitless rates or modes of motion between the poles. These rates or modes of motion can be differentiated by means of radiant colors, but not by a galvanometer or a bar magnet.

the line. The energy from tuberculosis and carcinoma are both dissipated by negative energy, and the energy from syphilis and gonorrhea are both neutralized by positive energy, but see how much farther I am able to go by using the terms **rate or mode of motion**. **T** graphically represents the rate or mode of motion of tuberculosis. That rate or mode of motion is dissipated by the rate or mode of motion of ruby, radiant energy. **C** graphically represents the rate or mode of motion of carcinoma, and its energy is dissipated by the rate or mode of motion of radiant energy represented by "burnt orange," as shown in the B-Chromatic Screen. **S** graphically shows the rate or mode of motion of syphilis and that energy is dissipated by the radiant energy from the C-Chromatic Screen which is of a certain blue vibration. **G** shows the rate or mode of motion for gonorrheal infection, and that energy

is dissipated by the rate or mode of motion from the D-Chromatic Screen, and also by the plus end and the minus end of the diagnosing magnet.

The dotted line at **S** graphically represents one pole of the magnet while **T** represents the opposite end of the magnet. Now if this line were turned into a circle, **G** would go between the positive and the negative end and therefore would contain the energies of both the positive and the negative, which it does as proved by my diagnosing magnet. This works out beautifully with the Chromatic Screens.

The radiated color of the D-screen is the same as the combination of the A<sup>4</sup>-screen, which dissipates the energy of tuberculosis, and the C-screen, which dissipates the energy of syphilis. These two screens give off energies similar to positive electricity and negative electricity respectively, as is mentioned on pages 17, 32, 38. Therefore it would naturally be expected that the energy at **G** would be a combination of the two—both positive and negative. This energy might be called neutral, but for this work it is preferable to say that it is a rate or mode of motion dissipated by the D-Chromatic Screen.

This dissipation of energy can well be understood when we consider the **interference of sound** as an example of other rates or modes of motion.

## INTERFERENCE OF SOUND

If one will take a tuning fork, set it in vibration, hold it to the ear, and slowly turn it about, there will be an exact point reached when there will be no sound. This is the "silent" location or the location where the vibrations from the tuning fork meet each other in a way to cause an interference—no sound.

Fig. 8 shows one of the simple devices used for demonstrating this, and is one of the standard methods used in technical laboratories for demonstrating the interference of sound.

Altho there are very many other methods for demonstrating this, the illustration given is sufficient for an explanation.

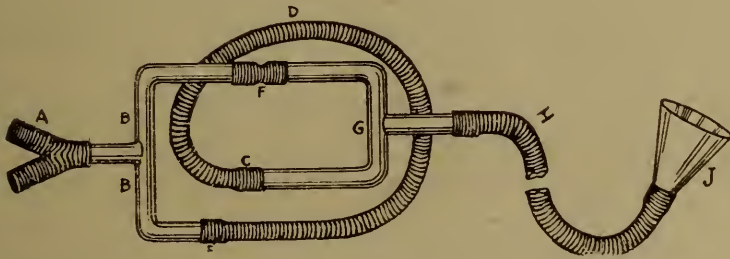


Fig. 8—Showing a device for demonstrating the interference of sound

The following is a description of the device and how it works. **J** represents the receiving end in front of which a tuning fork having 528 vibrations a second ( $C'$ ) is vibrated. **H** is a rubber tube that connects the receiving funnel and the glass tube **G** together. **F** is a small piece of tubing connecting **G** and **B** together at one end. **CDE** is a piece of the same size rubber tubing 33 centimeters long. **A** is a Y-piece for attaching a binaural ear-piece such as is used in a stethoscope. As the vibrations pass thru the tuning fork from tube **HGFB**, they are interfered with by similar vibrations passing thru the tube **CDE**. As the length of this tube is in proportion to the vibrations of the tuning fork, the sounds reach **A** in completely opposite phases. Therefore they will neutralize each other and no sound will be heard. If we close the rubber tube, **CDE**, by pinching it up with the fingers, the note is immediately heard. This proves that it is the interference of sound that produces the silence.

For this experiment the length of the tube, **CDE**, must be exact (half the wave-length of the note produced by the fork) so as to have the sound reach the ear in opposite phases. The rule is that "if two waves of sound of the same length proceed in the same direction and if they coincide in their phases, they strengthen each other. If, however, their phases differ by half a wave length, and the amplitudes of vibration are the same, they neutralize each other, and silence is the result."

## DETECTION OF SEX AND PATERNITY OF THE UNBORN

### Sex Detection

On page 280bb is discussed the prognostication of sex. I have found by all sorts of experiments that it is not so much a change of "polarity" which indicates this as the amount of energy given off from one side of the body or the other.

Fig. 9 shows a little device that I call a "sex detector." It is a piece of hard wood twelve inches long, turned in the shape indicated and highly polished. In the finger end of this device is placed a heavy aluminum cup. By placing the hand as indicated in the sketch, one hand will elicit a VR in a normal subject but the other will not, if both patient and subject are grounded and facing east or west in a subdued light, provided the ball tip of this device just touches the epigastric region of the subject.

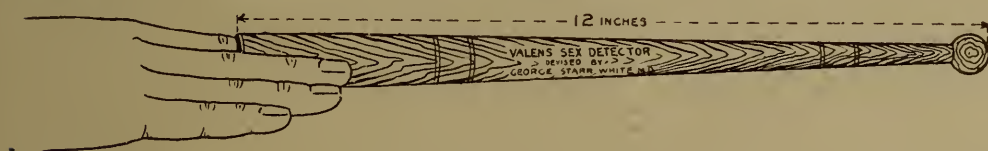


Fig. 9—Showing Valens Sex Detector. The finger receptacle is a thick aluminum cup. The wood is dry, hardwood, highly polished.

The reason for this phenomenon I think is because the energy from one hand in a normal person is greater than that in the other. It is not because of "polarity," as we have proved by very sensitive galvanometers. The "polarity" of the thumb is different from the four fingers and will change sometimes within half an hour, but whenever the change takes place, the indicating mirror of the galvanometer is always different with the thumb than with the four fingers, and it is different with the thumb of the right hand than it is with the thumb of the left hand.

The sex of the fetus, therefore, seems to be determined by the amount or "voltage" of the energy given off. For example, if the right hand is placed in this detector, as indicated in the sketch, and the technic carried out as above stated, if the patient is three or more months pregnant and the VR is elicited by her right hand, the child will be a girl. (The mother



and subject must be grounded to the same kind of metal and face east or west.) If the left hand has to be used to elicit this reflex, the child will be a boy.

### **Detection of Paternity**

I have discovered a very peculiar phenomenon in making many of these tests. I have found that if the father of the fetus is within five or eight feet of the mother, or in fact in the same room, while the test is being made, the energy from the hands will be reversed, and the findings are opposite to those above mentioned. If, however, the man in the room is not the father of the fetus, there will be no change. This seems to indicate the subtle influence of vital force or aura of one person upon another.

I would not think of going into court with these findings as a proof of pregnancy or of paternity, but it is an interesting experiment, and whether it always proves true or not, it shows that there is something in vital force that is deeper even than thought.

# BIO-DYNAMO-CHROMATIC DIAGNOSIS AND THERAPY

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## PREPARING THE PATIENT FOR EXAMINATION

For my Bio-Dynamo-Chromatic method of diagnosis I have found that having the radiant colored light shine on the face is sufficient with some individuals but not with others. It is for that reason that I make it a rule to have the chest of all patients bare while eliciting these reflexes.

When doing this work, have all spectral colors removed. I have found it best to have everything removed except a white or a dark skirt. The shoes and stockings need not be



Fig. 10—Simple, home-made, skirt supporter to be used in examinations. Wooden-spring clothes pins and tape and slide buckles.

removed if they are not of a spectral color. Hose supporters of a fancy color or garters that constrict the limb should be removed. (Have the light in the room very much subdued. The light from a paraffin or tallow candle is best of all. Next best is that from an oil lamp.)

## SKIRT SUPPORTERS

Fig. 10 shows a very simple, cheap and effectual skirt supporter. It is made with spring clothespins and a piece of tape or cord. A hole is bored thru one side of the clothespin and the tape or cord fastened in it. Any kind of hose supporter

can be used, but this device is more easily and quickly manipulated. The suspender can be made shorter or longer by means of a loop or a metal slide.

When such a skirt supporter is used the skirt can be perfectly loose all about the body and not interfere with the work.

Tight bands about the body during diagnosis make the work unreliable.

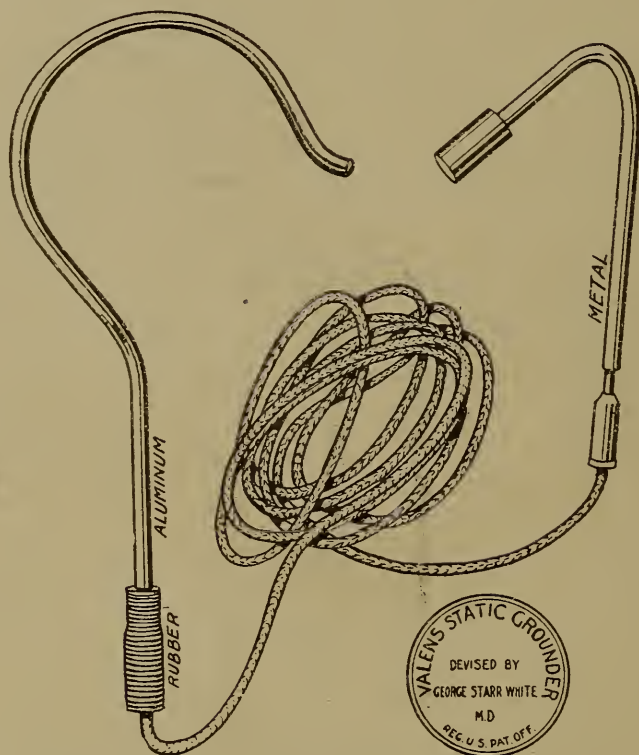


Fig. 11—Showing Valens Static Grounder.

## GROUNDING THE INDIVIDUAL

Fig. 11 shows my **static grounder**, the use of which is described on pages 25 and 26. The metal hook with the weight on it can be of any kind of metal. It has a weight on the end of it so it can be thrown over a gas fixture, a wire or any grounding material and stay where it is put. (Figs. 27 and 28.) The cord is the standard insulated battery cord. The shepherd's crook end is made of aluminum, and that is the end that comes in contact with the body of the individual being tested. There is a piece of rubber to insulate the cord tip as



it goes into the aluminum. This is very important, as described on pages 17 and 18.

As described in some of my previous writings, grounding individuals by means of standing them on an aluminum plate is not at all reliable unless the shoes and stockings are removed. The only reliable way of grounding an individual is to have the metal come in contact with the skin. The grounding of a person while sleeping can be done very well by having any kind of wire placed directly under the sheet on which he lies, but for all Bio-Dynamo-Chromatic work I insist on both patient and subject being grounded with aluminum in contact with the skin.

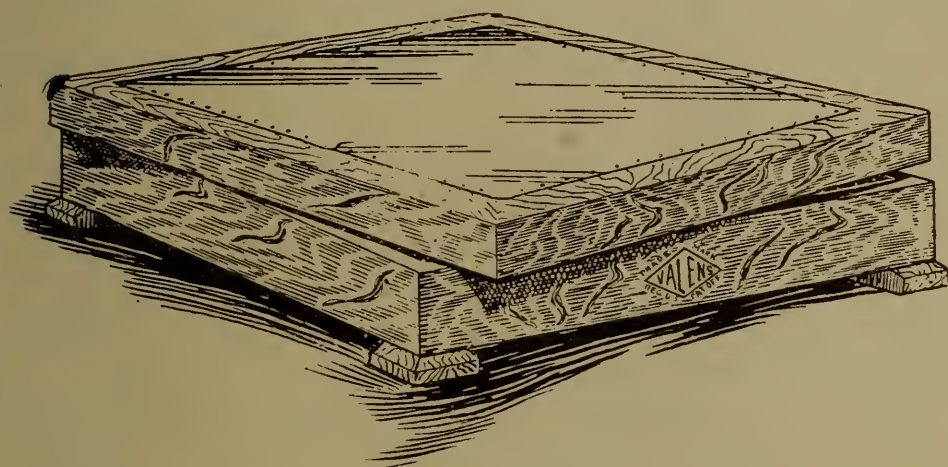


Fig. 12—Showing Valens Turntable made to match the finish of the Valens Pedestal.

### \*VALENS TURNTABLE

Figs. 27, 40, 62, etc., show the simplest form of turntable that I use for turning the patient. The stationary part of this turntable can be made any height to accommodate the physician. The best average height is from four to six inches. The top of this **stationary** or under part is covered with heavy metal so that the ball-bearing rollers in the upper or revolving part will have a solid material to turn on.

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\*Many have asked what "VALENS" is or what it means. VALENS is my registered trademark. Anything which has the word, VALENS, on it is devised by me and is manufactured under my personal supervision.

An axle is attached to the lower or stationary part, upon which it turns. The upper surface of the turntable can be covered with aluminum, but it is not necessary as we have found that grounding the individual to the bare skin is infinitely better than grounding thru the shoes or stockings. However, aluminum makes a fine appearing top.

By using a turntable the individual does not have to move a muscle when being turned from east or west to north or south, which greatly facilitates the work of diagnosing.

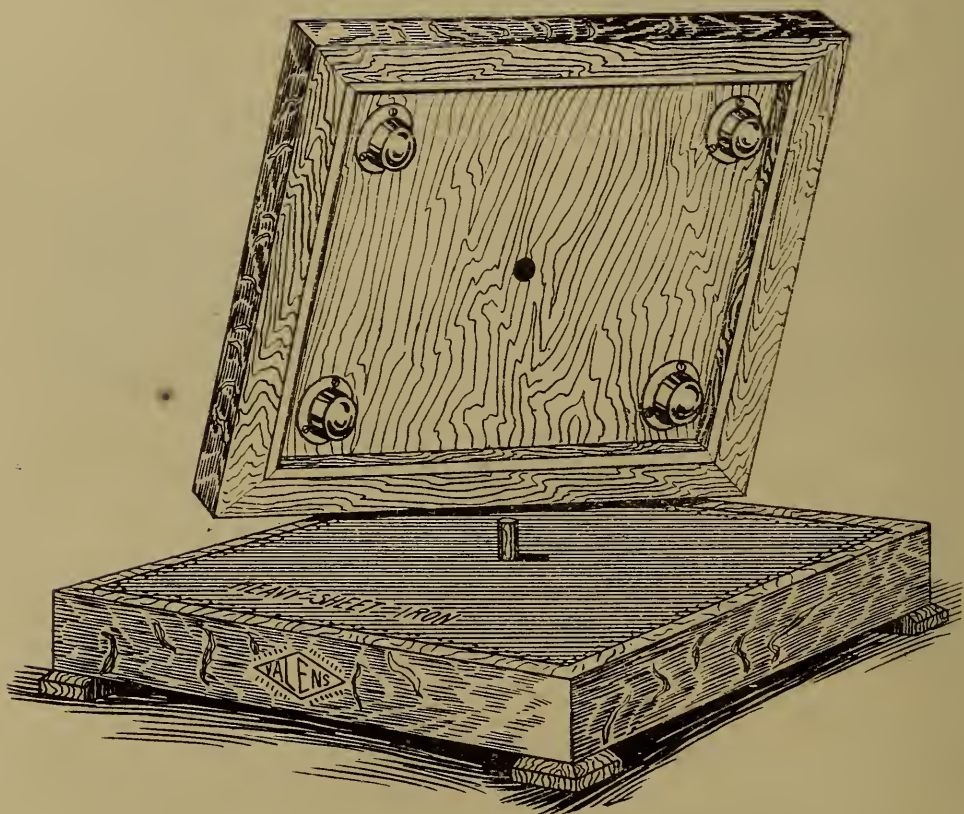


Fig. 13—Showing construction of Valens Turntable. It is 14 inches square.

Figs. 12 and 13 show **Valens Turntable**, made to match Valens Pedestal. This makes a beautiful outfit to have in the diagnosing room. This turntable is fourteen inches square and the top or revolving part is covered with aluminum. Any good cabinet maker can make a turntable like the one illustrated. Quartered oak in natural finish I think is the best.

## VALENS FOOT SWITCH

Fig. 14 shows the foot switch which I employ for turning the colored light on and off. I find the use of such a switch is almost imperative in doing accurate work when the patient faces north or south and has the light from the Bio-Dynamo-Chrome thrown directly on the bared chest. The light can be instantly extinguished by the foot and the change of tension in the capillaries can be immediately demonstrated by air-column percussion or other air-column vibration.

Another advantage of the foot switch is found when demonstrating the use of the ruby light. If the ruby light is shining on the bared chest of a normal individual while facing north or south, the same tone obtains as when they are facing east or west. (See page 49.) By extinguishing the ruby light the same change in tension takes place as when the person is

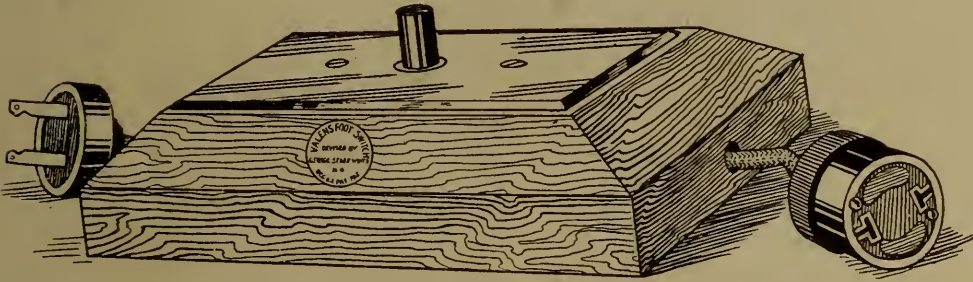


Fig. 14—Valens Foot Switch for Bio-Dynamo-Chromatic Diagnosis. Each pressure of plunger puts light on or off.

turned from east or west to north or south. By using the foot switch to extinguish the light, the hands are at liberty and no assistant is needed.

The **Valens Foot Switch** is a standard, porcelain protected, plunger switch of the best make. The porcelain box is set into an oak block and covered with a brass plate. A standard cord connector is attached to the switch, so it can be attached to any standard Hubbell plug. Each push of the plunger puts the light on or off.



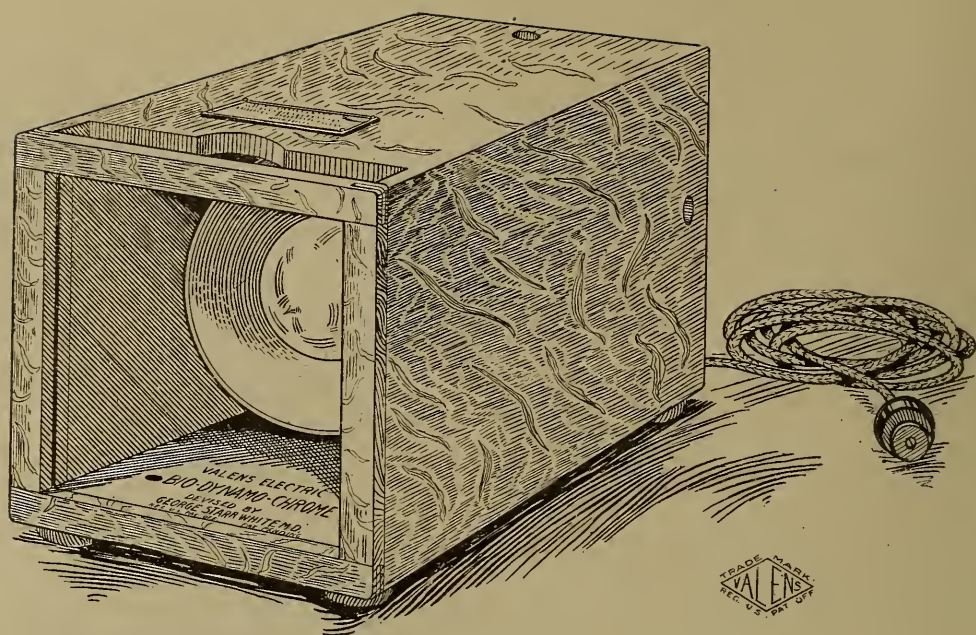


Fig 15—Valens Electric Bio-Dynamo-Chrome



Fig. 16—Back view of Valens Electric Bio-Dynamo-Chrome supported on a camera tripod. Pushing plunger *A* in with *B* out, gives a steady light, while pushing *B* in and *A* out gives intermittent light.



## VALENS ELECTRIC BIO-DYNAMO-CHROME

(Bios, life; Dynamis, force; Chroma, color)

The Valens Electric Bio-Dynamo-Chrome, shown in Figs. 15, 16, 17, is the electric light box which I devised for my Chromatic Screens. This device is made of quartered oak, natural finish, and fitted up with specially made fixtures thru-out.

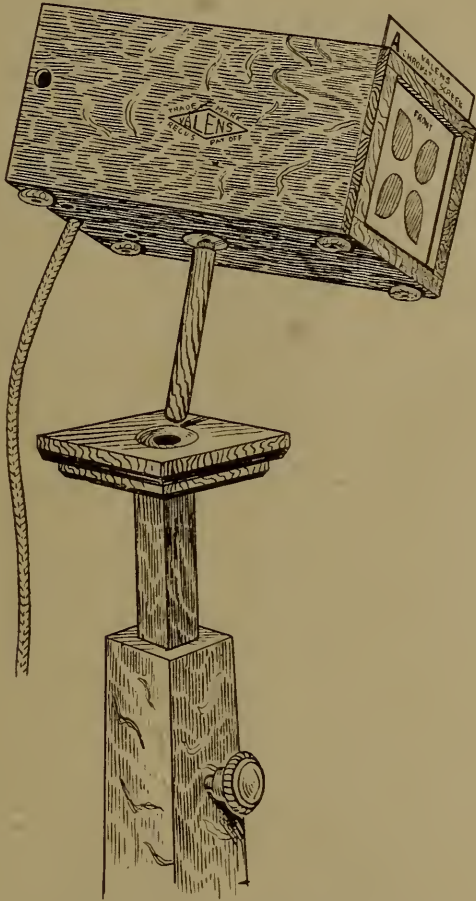


Fig. 17—Showing under part of Valens Electric Bio-Dynamo-Chrome with Pedestal Pin in place.

A special aluminum reflector has been made for this Electric Bio-Dynamo-Chrome for throwing the light in proper radiations against the Chromatic Screen. The distance of the lamp bulb from the screen is accurately gauged.

The lamp used is a 60-watt tungsten, placed three and one-half inches from the screen.

The thermostatic make and break device in the back of the box is so made that the adjusting screw for regulating the intermittence of the light can be gotten at thru a hole in the box without removing anything from the box.

On the under side of the box is a metal screw-plate with threads cut in it to fit the ordinary camera tripod, as shown in Fig. 16. If one wishes to use a pedestal, as shown in Fig. 18, a double-end screw can be used in a pedestal pin, or post,

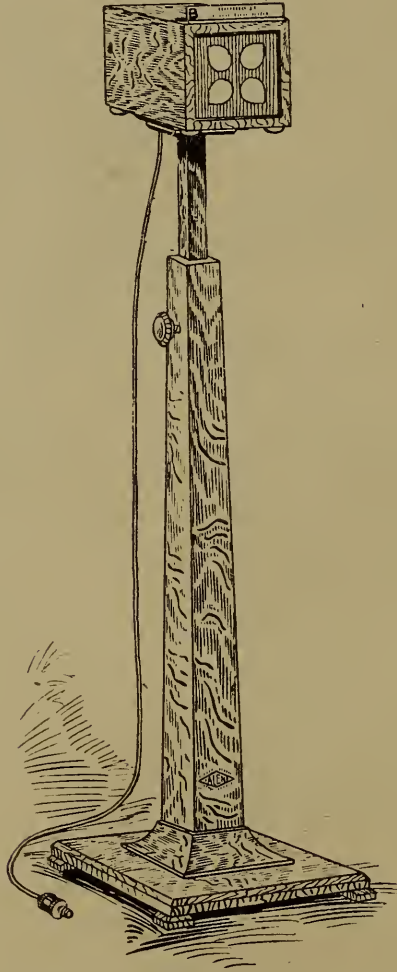


Fig. 18—Valens Electric Bio-Dynamo-Chrome on a Valens adjustable pedestal

as shown in Fig. 17. This prevents the box from falling off the pedestal and allows it to be freely movable.

This box is provided with four wooden legs so it can be set on any table and at the same time allow air to circulate under it.

Several vent-holes are made in this box so as to keep the thermostatic make and break device from becoming overheated, as well as to prevent too much heat from accumulating about the screen.

The front of the box is so made that Chromatic Screens can be easily put in and taken out and still leave a large air space between the screen and the box. This is so arranged that the heat from the lamp will not affect the silks used in the Chromatic Screens.

Fig. 16 shows the back end of the Valens Electric Bio-Dynamo-Chrome. **A** and **B** are the switches operating these outfits. When plunger-switch **A** is in and **B** is out, a constant light is on, and the apparatus can be used thru any form of outside mechanical interrupter, such as the Valens Metro-nomic Interrupter or a motor interrupter. When plunger-switch **A** is out and **B** is in, the current passes thru the specially made thermostatic interrupter, which is used for giving Bio-Dynamo-Chromatic Therapy (intermittent light treatment.)

Fig. 17 shows the under part of the Valens Electric Bio-Dynamo-Chrome and shows the removable post or pin that can be screwed into the plate on the under side of this Bio-Dynamo-Chrome for holding it on the pedestal.

It will be noticed that there are several ventilation holes on the under side of the Bio-Dynamo-Chrome. Figs. 15 and 16 show that there is a permanent ventilation thru the top of the Bio-Dynamo-Chrome just back of the screen. It will also be noticed by referring to the mortise and tenon front of the Bio-Dynamo-Chrome in Fig. 15 that a special slot is made for putting the Chromatic Screen into. This slot holds the screen in its proper position so it cannot tilt forward or backward. This keeps the screen at a definite distance from the lamp and allows the ventilation that is needed. When used in this manner the screen will last indefinitely.

The distance between the 60-watt lamp bulb and the screen is  $3\frac{1}{2}$  inches. If the distance is between  $2\frac{1}{2}$  and  $3\frac{1}{2}$  inches, a 40-watt tungsten lamp must be used, as a 60-watt would be too strong.

Valens Chromatic Screens cannot be used if the distance is less than  $2\frac{1}{2}$  inches between the lamp globe and the screen.

because the required candle power lamp cannot be employed without injuring the screen. It is for that reason that the users of these screens must understand just how the holder should be made and ventilated if they make their own holder.

Valens Electric Bio-Dynamo-Chromes are furnished to physicians at less than cost in order that they may use the correct device to get the correct results from the Chromatic Screens. I had to use a standard of illumination before getting out the Chromatic Screens, and I found that the 60-watt-tungsten lamp placed  $3\frac{1}{2}$  inches back of the screen gave the

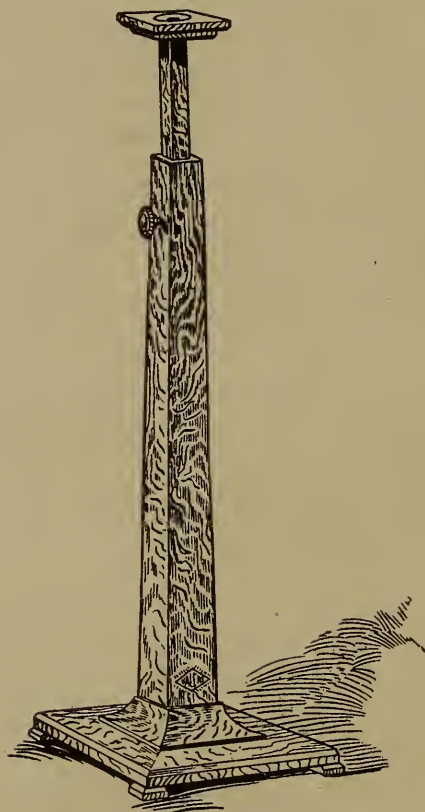


Fig. 19—Valens Adjustable Pedestal

correct radiation without heating the screen, provided the ventilation were correct.

By using the detachable post (Pedestal Pin), illustrated in Fig. 17, these Electric Bio-Dynamo-Chromes can be attached to any kind of a frame that the physician might want to attach to his oxygen vapor generator, or to a bracket in any part of the room. There must be a free air circulation in Valens Electric Bio-Dynamo-Chromes, and for that reason a leg is put on each corner.



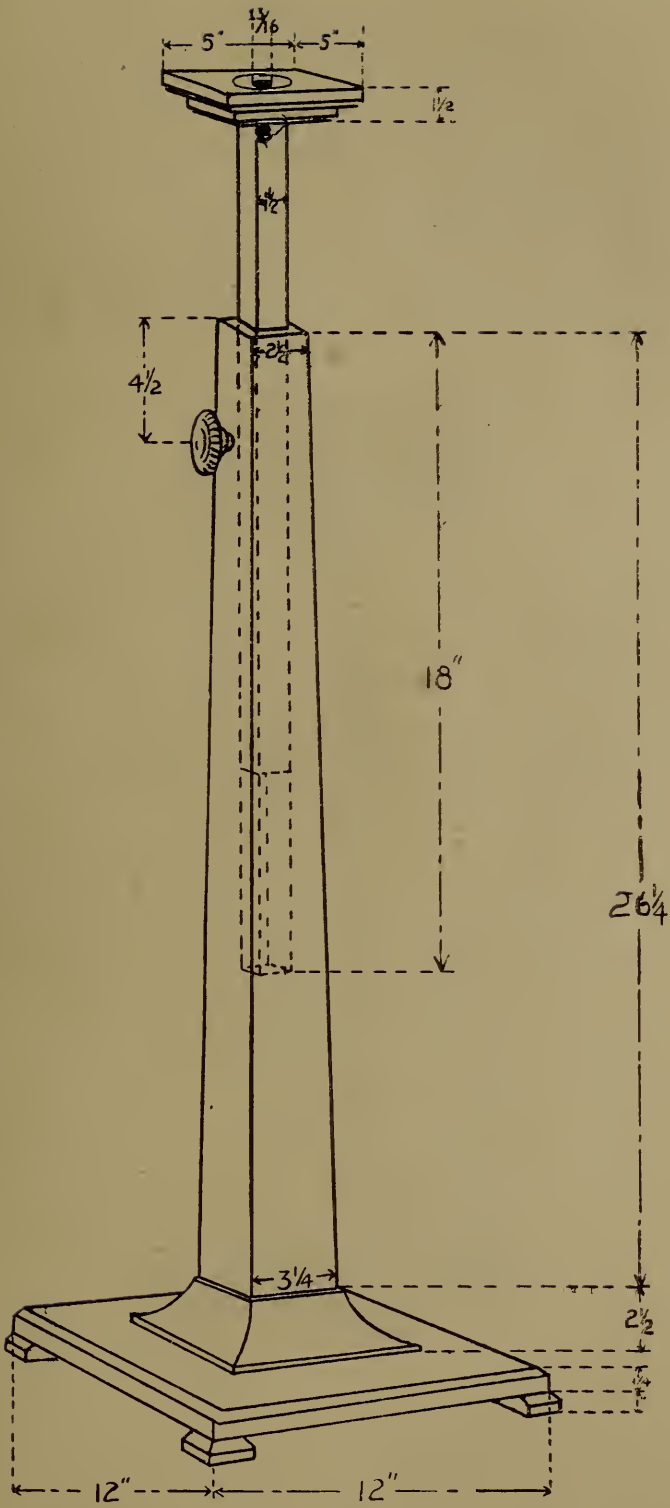


Fig. 20—Working plan of Valens Adjustable Pedestal. It should be made of quartered oak to match the Valens Bio-Dynamo-Chrome

## VALENS PEDESTAL

The pedestal that I devised for use with the Valens Electric Bio-Dynamo-Chrome is shown in Figs. 18 and 19. It is so arranged that it can be raised or lowered to radiate the light from the Chromatic Screen directly on the epigastric region. Fig. 20 gives the exact dimensions of this pedestal so any cabinet maker can duplicate it. They should be made of quartered oak, natural finish, to match the Bio-Dynamo-Chromes.



Fig. 21—Two Valens Electric Bio-Dynamo-Chromes used together on one pedestal

### Two Bio-Dynamo-Chromes on one Pedestal

Fig. 21 shows how I use two Electric Bio-Dynamo-Chromes on one pedestal. They are so arranged as to focus together about five feet away from the chromatic screen. I

use such an arrangement for experimental work and for combining radiant colors. In this manner I can use two different colored screens at a time to observe the effects upon the reflexes and in that way can arrive at the proper combination to make in the Chromatic Screens. This special arrangement is necessary only in research and development work.

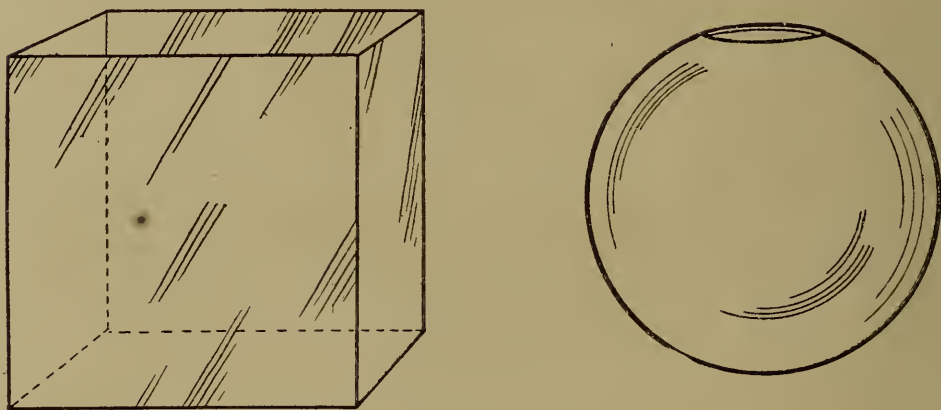
In like manner four Electric Bio-Dynamo-Chromes, focusing on the same area, can be used at one time.

## VALENS CHROMATIC SCREENS FOR VALENS ELECTRIC BIO-DYNAMO-CHROME

### How I Developed Them

The first color I used for Bio-Dynamo-Chromatic Diagnosis was the ruby used in my fotografic dark room. This ruby was the cloth screen with which I made my safety lamp box.

Later I used the "safety" electric light bulbs, which were of a deep ruby, especially made for fotografic-dark-room work. I could not always obtain these globes, so searched for glass that could be used for this purpose. I was able to obtain about a hundred pieces, and they worked very well, but had to be used with a carbon lamp no stronger than 16-candle-



Figs. 22 and 23—Absorption Cells used in my experimental work for holding colored liquids

power. I also had cobalt-blue-lamp bulbs for diagnostic purposes. When the war broke out I was unable to get glass that would stand the test.

I then tried celluloid, but found that the colors were never uniform and could not be depended upon.

I then began a long series of experiments. In glass absorption cells, as shown in Figs. 22 and 23, I placed colored liquid. Light was reflected thru these cells, so the radiant color would shine on the bared chest of the patient. By using several tubes at one time and radiating various combinations of colors on the body, I was always able to find a color or combination of colors, that would elicit the MM V.R.



By comparing the color thus employed thru a photospectrometer, Fig. 24, I ascertained just what color I was employing. From this knowledge I made gelatin sheets and placed them in cardboard and thus made screens of the correct color for the condition under examination.

In this manner I experimented with a great variety of gelatin colors and made up a large assortment.

With these pieces of gelatin placed in cardboard masks, I was able to elicit the reflex in all abnormal conditions. I found, however, that gelatin would not stand in various climates and that the heat from the lamp would crack it. Therefore it was not practical.

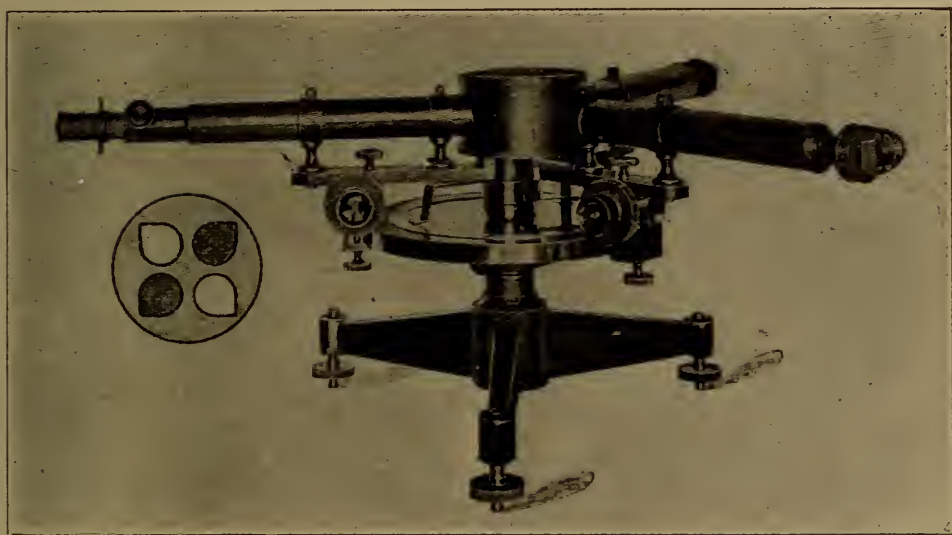


Fig. 24—Photospectrometer used for studying and standardizing colors

I then began investigating silks and linens. I visited various places where such goods were made and found I could have a certain weave made that would be suitable for the work. The greatest obstacle was to obtain the true colors. I had a limited supply of true anilin dyes that I had obtained before the war broke out, but had used a good deal of that in making the gelatin sheets. I was able to interest some of the largest dye masters in the United States in the work, and they obtained some true dyes and got out silks that I needed.

By using an elaborate outfit for comparing and testing colors (See Fig. 24) I could see whether the color used in the dye were correct.

I met obstacles that were well nigh unsurmountable in making fabric screens, but finally succeeded, till now I have all the colors standardized.

At present I am having a very elaborate instrument made for testing colors of silks and linens. Its great collimators

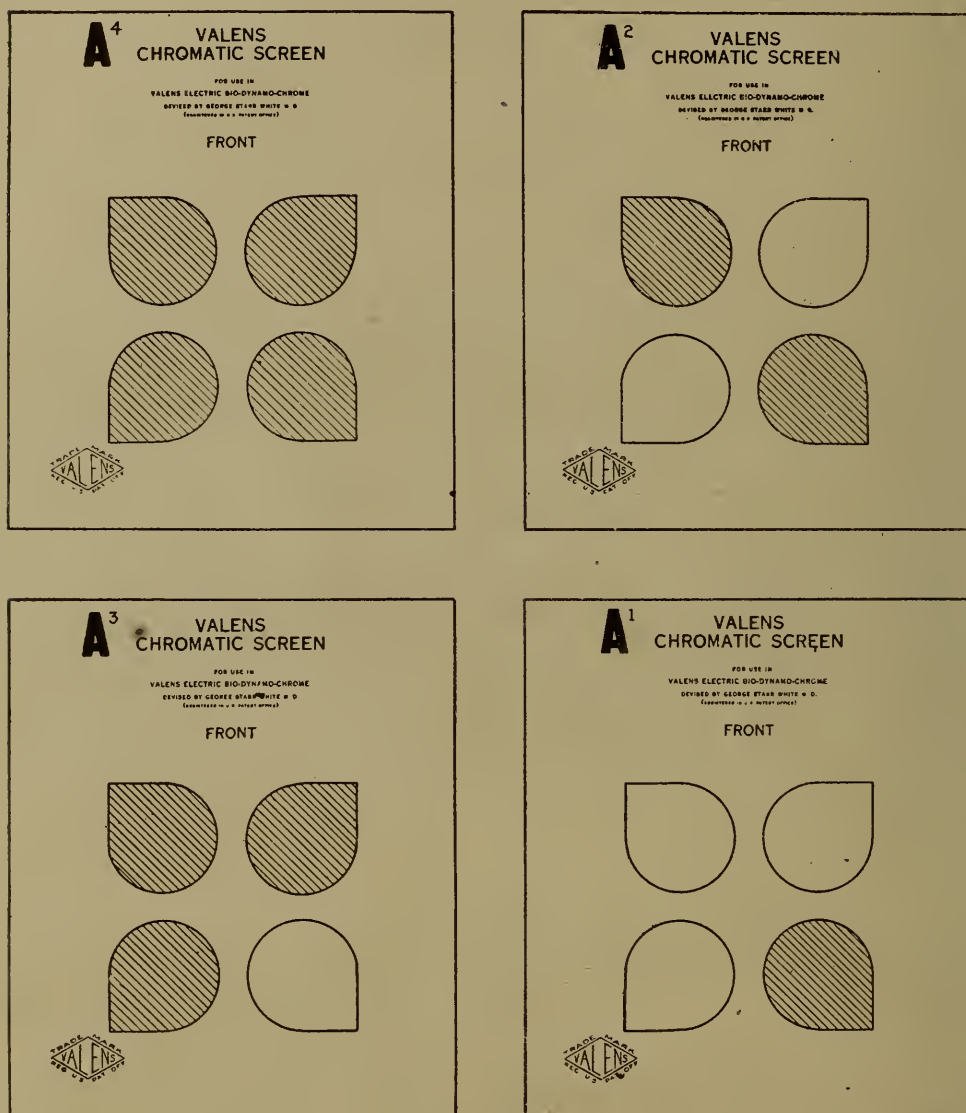


Fig. 25

will be about four feet long. The instrument is being made so combinations of various colors can be measured as one color.

I have found that I can obtain the best color for ruby and "burnt orange" in linen. It was very difficult to get the correct blue. After a long series of experiments, I found that by

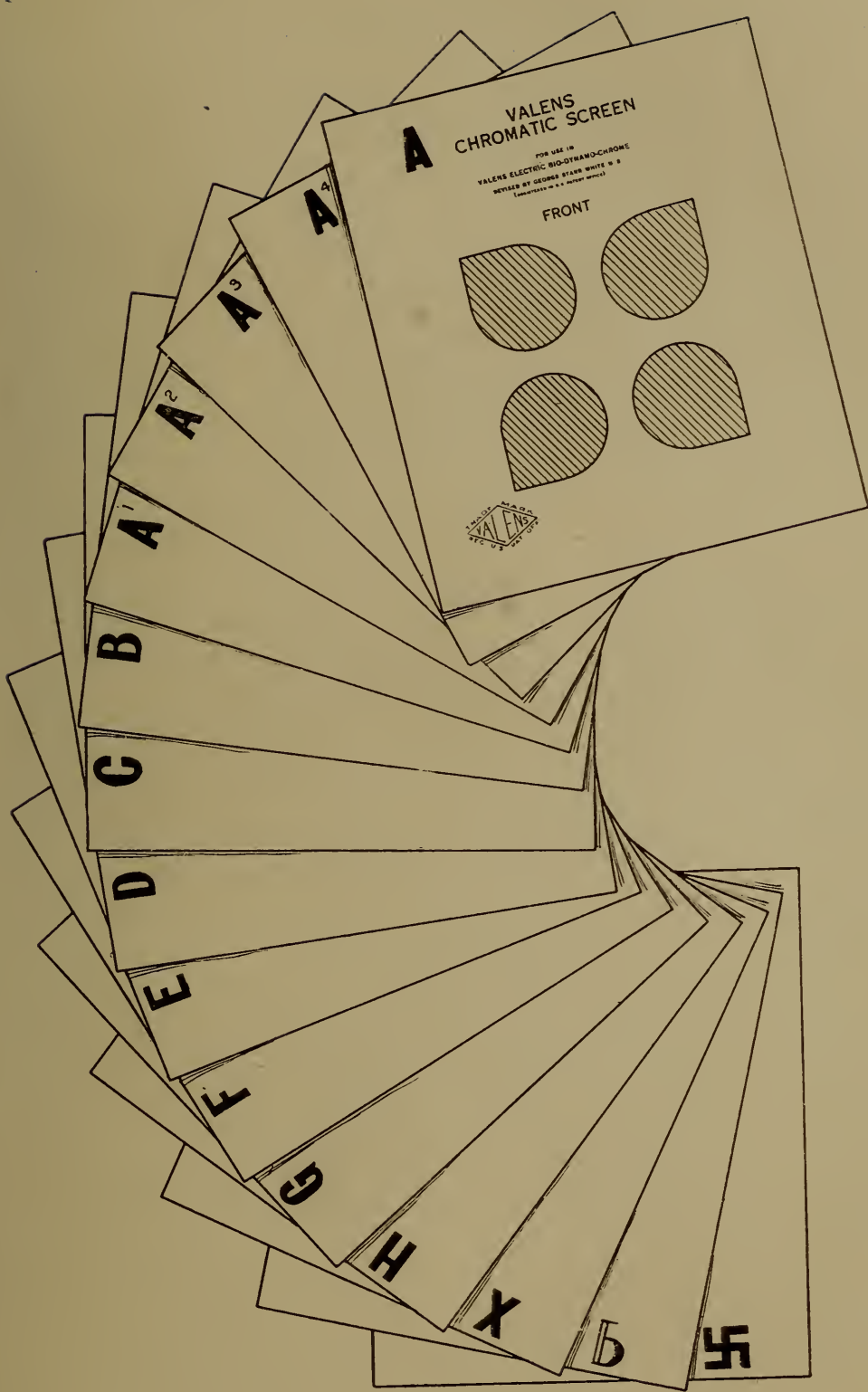


Fig. 26

passing the light thru two different fabrics of different shades, I was able to get the exact radiation of color needed for the work.

The mounting of these silks and linens was another problem. I tried various designs and forms, but all had their shortcomings, until I devised the screen with four apertures (Figs. 25 and 26) so arranged that radiant colors can be mixed, that is, one aperture is screened with silk or linen of one color, and another with another color. Thereby an effect is obtained similar to that produced by various tints and hues. I found that a board with a specially calendered surface, technically known as "pressboard," when glued with a specially prepared glue, would make a sheet that was almost identical with a solid fiber board.

I had dies made for stamping out these sheets, and between the sheets placed the fabric. Then in a heavy press the board and fabric are cemented together, making a screen almost indestructible, and one that is ideal for the work.

The fabrics are so made that each one will give the amount of radiant color required for its particular use when it is a definite distance in front of a reflected light from a 60-watt-tungsten lamp. It is on this basis that all Valens Chromatic Screens are made. These screens will not fade if kept in a dark cloth or away from the sunlight.

### Designation of Valens Chromatic Screens

As the names of colors are entirely arbitrary—one dyer calling a certain color one name and another calling it another—I have designated my Chromatic Screens by letters and numbers. The letters indicate the use of the screen and the numbers indicate the attenuation of that color. For example, Fig. 25, shows four screens all marked **A** (which designates a certain color) but with the numbers 1, 2, 3, 4. **A**<sup>4</sup> indicates that the four windows or apertures are of the **A** color; **A**<sup>3</sup> means that three are of the **A** color and one is white; **A**<sup>2</sup> means that two are of the **A** color and two are white; **A**<sup>1</sup> means that one is of the **A** color and three are white. In this way the color that is used for **A** is diluted the same as diluting the dye in the same proportion.



It is by these attenuated colors that I differentiate the various stages or activity of the disease being diagnosed. This is particularly useful in tuberculosis. This attenuation of colors does not seem to be of any special advantage in any other toxemia except in specific urethritis, where it differentiates between an acute and a chronic condition. These diluted colors also enable one to watch the improvement from the therapeutic measures.

In my laboratory I am experimenting with a great array of colors and combinations. I have found that a certain color or combination of colors elicits the reflex in certain conditions, and when I am able to name that condition under the head of a "disease," I designate that screen by a certain letter. That letter indicates the group of symptoms, or the "disease" which that definite screen will diagnose.

### Note

To protect the users of my system of Bio-Dynamo-Chromatic Diagnosis and Therapy, my standardized Chromatic Screens are named **Valens Chromatic Screens**. This name is registered in the United States Patent Office so no one else can use it.

To further protect the users of this system, I am getting out patents on the process of making the screens as well as upon all the various devices used for the work.

Some physicians have criticised me for this, but they would not if they were posted in the ways of the world. None of the devices used are held at an exorbitant price, and it is only by protecting a system of this kind that it can be kept out of the hands of imposters, who would put out unreliable outfits to defraud the unwary physician. In all professions and walks of life, there are those who would never turn a stone or even push a banana peel off the sidewalk to protect a passer, yet they criticise anyone else who would. However, such people are in the great minority.

I have been a lifetime in developing this system, and have spent a fortune in so doing. I never think of the expense of anything when developing it, but have just one aim in mind and work to its attainment.

## Valens Chromatic Screens and What They Indicate

**A** is the screen made by combining "burnt orange" and ruby, and it will diagnose tuberculosis and cancer. (See page 46.)

**A<sup>4</sup>, A<sup>3</sup>, A<sup>2</sup>, A<sup>1</sup>** are screens for ascertaining the activity of the disease.

**B** is the "burnt orange" screen which is used for differentiating cancer from tuberculosis. It will diagnose cancer but not tuberculosis.

**C** gives correct blue of the proper radiation for diagnosing syphilis, auto-intoxication and malaria. (See pages 95 to 100.)

**D** gives the correct violet radiation for diagnosing specific urethritis. (See pages 102 to 107.)

**E** gives the correct green radiation for diagnosing liver intoxications. (See page 101.)

**F** gives a radiation of combined colors to differentiate malaria from syphilis. (It may also differentiate auto-intoxication, but I am not certain of this yet.)

**G** gives radiations from a combination of colors to diagnose influenza or grip. (See page 101.)

**H** gives a radiation of a magenta color which diagnoses deep-seated neurotic conditions, paranoia, etc.

**X** gives the proper radiations for intensifying the reflex. It will also enable one get the "working line" and the "reflex line" in an individual if they cannot be obtained in any other way. (See page 35.)

I also use it as a combination with other colors for eliciting the reflex in conditions where the other screens will not do it.

For example **X** back of **H** has diagnosed several cases of epilepsy. I need more cases of known epilepsy to say definitely whether it is true. If it is found true, I shall make a special screen for epilepsy.

**¶** This sign indicates a screen that is used as a **dimmer**. It is of white linen and is used for dimming the light in the Bio-Dynamo-Chrome, or for putting **back** of any color screen made of transparent media.

☸ This sign indicates the screen which I call a **blinder**. It is opaque and is used to give the apparatus a finished appearance and to keep daylight out of it when not in use.

All these silk and linen screens must be kept from the sunlight, and it is best to keep them in a closed box or wrapped in a dark cloth. The colors will last a lifetime if handled in this manner.

As fast as I am able to definitely describe certain symptoms that go with certain other colors and combinations of colors, I will inform my pupils. If my pupils find any special colors that indicate certain symptoms, I would thank them very much if they would let me know about them, as I am in a position to make any special screen of any combination of colors that anyone might desire.

## DIRECTIONS FOR OPERATING VALENS ELECTRIC BIO-DYNAMO-CHROME

### (Style C)

The lamp used in this apparatus is a 60-watt tungsten.

This outfit is made to be used with the Valens Chromatic Screens. If glass is used, place one of the Valens Dimmers back of the glass.

The distance from the lamp to the back of the screen is correct for the material used in the screens, and the radiant light given off from the screens is correct with this distance from the lamp.

When the plungers of the two switches on the back of this outfit are pulled out, no current is going to the lamp.

When the left switch (A, Fig. 16) is on, that is with the plunger in, and the right switch plunger (B, Fig. 16) is out, a steady light will be given.

When the left plunger is out and the right one is in, the current passes thru the special thermostatic interrupter and after two or three minutes, the current will be intermittent. That is the switch used when giving intermittent light treatment.

The intervals of intermittence of this light should be so adjusted that the light is on as long as it is off. To adjust this interval, use a small screwdriver thru the hole in the box that is opposite the large adjusting screw. It will be one of the side holes or the top hole at the back of the box (not those on the back lid.)

As this interrupter is a thermic interrupter, hot or cold weather will affect it a little. It will also be affected by use and in time it will wear out. This is the only part of the apparatus that will not last for years. It is easy to put in a new interrupter, as I have standardized them and have them made up in quantity. They are made especially for this device. As the wires are all put on by wire terminals, it is an easy matter to put in a new interrupter.

All the inside workings of the box are removed when the back is taken off.

The ventilation of this apparatus is made correct. It will be noticed that the top of the screen cannot hit the back of



the opening. This allows a good circulation of air back of the fabric.

The screw-plate on the under part of Valens Bio-Dynamo-Chrome is for attaching the pedestal pin or for attaching to a camera tripod. (Figs. 16 and 17.)

## DIRECTIONS FOR USING VALENS CHROMATIC SCREENS

Screen A is for diagnosing tuberculosis or cancer. It is made in attenuations  $A^4, A^3, A^2, A^1$ . For intermittent treatment of tuberculosis  $A^4$  should be used regardless of what attenuation will elicit the MM VR. **Use  $A^4$  also for one with a normal MM VR.**

Screen B is for cancer and not for tuberculosis. It is used for the treatment of cancer as well as for differentiating cancer from tuberculosis.

Screen C is for syphilis, auto-intoxication, or malaria. Use this screen for the intermittent light treatment for syphilis or auto-intoxication.

Screen D is for specific urethritis. It is made also attenuated one-half, that is  $D^2$ . Screen D is used for treatment.

Screen E is for jaundice or liver intoxications and is used for treatment of same.

Screen F is for malaria and differentiates malaria from syphilis. It is used for the treatment of malaria.

Screen G is for influenza (la grippe) and is used for treatment of same.

Screen H is for deep-seated neurotic conditions such as brain-tumor, paranoia, and other progressive deep-seated nervous conditions.

Screen X is for intensifying reflexes. The technic for using it is to let light radiate thru it on the bare chest while the patient is facing in any direction, and then extinguish the light and proceed as if no light had been used.

This screen placed back of Screen H has diagnosed a few cases of epilepsy (grand mal). I wish each user of this system would test this out and report whether they can diagnose this disease with this screen. If so, a special screen will be made for it.

¶ The Dimmer screen is to be used back of any transparent material used in place of fabric, such as glass, gelatin, or cel-luloid.

卐 The Blinder screen is to be kept in the box when the outfit is not in use. All other screens should be kept from daylight. They should be wrapped in a dark cloth or kept in a dark closet. If so handled, they will last indefinitely and will not fade.



stout hook on one side of the room and to a turnbuckle at the other side of the room.

The direction of this wire should be accurately mapped out by a magnetic needle. To do this, the needle should be



Fig. 28—Showing the manner of using Valens Vagotonometer in demonstrating the Elicitation of the MM VR



placed on a box one or two feet high so it will not be influenced by nails or metal girders in the floor. (Never place the magnetic needle on a chair with steel springs in it. It is for that reason that a wooden or paper box is preferable to anything that may have metal in it.) Draw a cord across the room exactly parallel with this needle. Then mark those places on the wall or floor and use a plumb line to get the exact position on the upper part of the casing or wall for placing the screw eye into which fasten the wire. By means of the turnbuckle, this wire can be made taut.

Have this aerial-grounding wire as near to the place where you test the patient as possible.

From one end of this aerial-grounding wire, another wire is carried down to a gas jet or water pipe, as shown in Figs. 27 and 28.

It is to this aerial grounding wire that the Static Grounders are to be attached, as shown in the various figures, showing a grounding wire attached to the subject.

## RUBY LIGHT TECHNIC

On page 32 is mentioned the fact that the ruby light will dissipate the MM VR in a normal individual. Therefore when the individual is facing in the MM with the ruby light shining on the bared chest and epigastric region, the tonicity of his body is temporarily the same as when he is facing east or west.

It is for that reason that the Bio-Dynamo-Chrome is facing the epigastric region in the various figures illustrating the technic of this work. (See Figs. 4, 27, 56, 62, etc.)

By operating the foot switch (Figs. 14, 27, 28, etc.), the ruby light that is shining on the epigastric region is extinguished, and that has the same effect as turning the patient from east or west to north or south, provided the patient has a normal MM VR.

(The body is grounded with the Static Grounder. Fig. 27 shows this Static Grounder in contact with the aerial wire, the aerial wire being attached to a gas jet. All the other groundings are similar to this, altho they may not show in the pictures.)

## THE PULSE PHENOMENON

Figs. 29 and 30 show the technic for obtaining the Pulse Phenomenon that I discovered, and it is described on page 213.

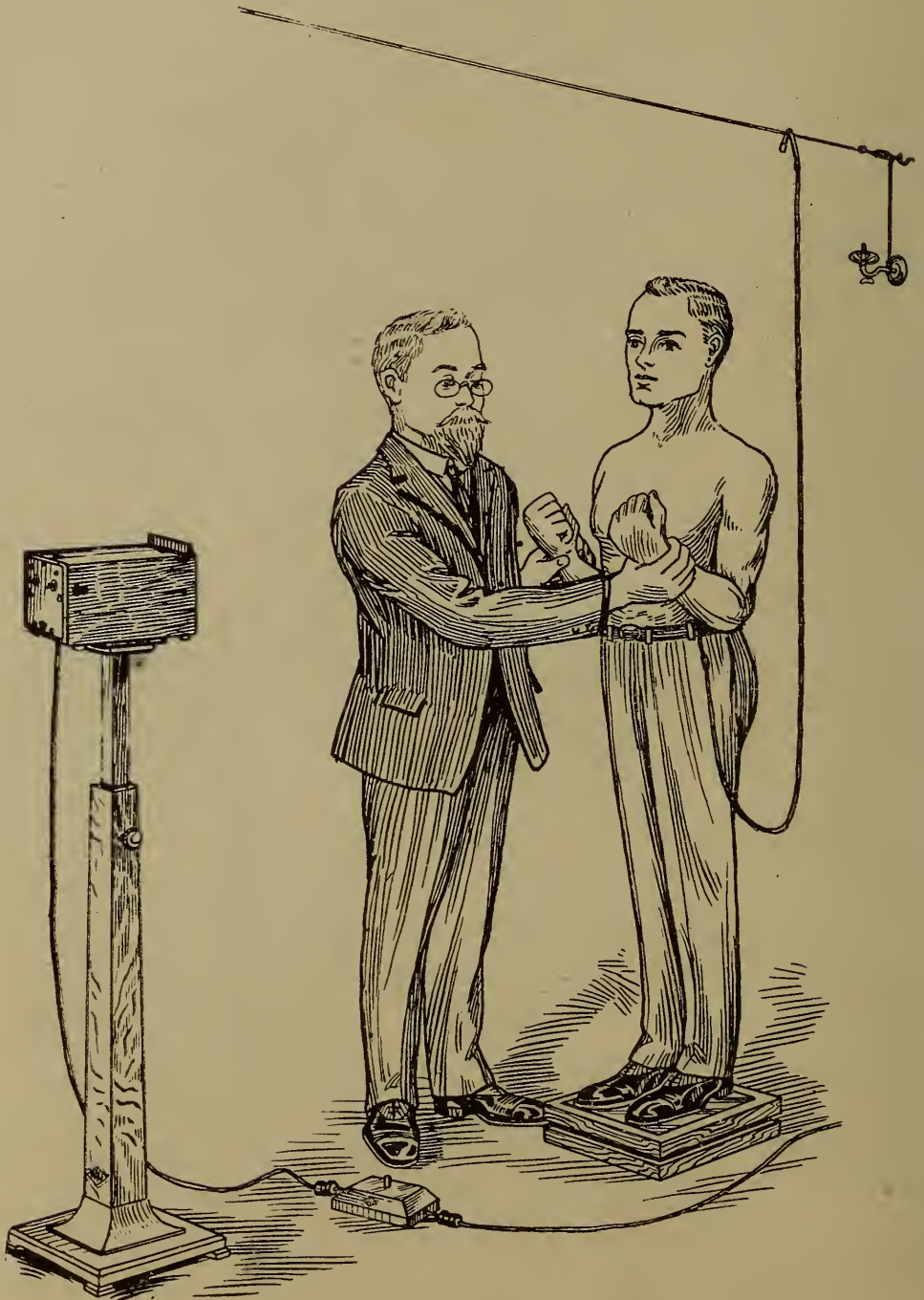


Fig. 29—Showing how to demonstrate my Pulse Phenomenon.  
Demonstration of the Elicitation of the MM VR by means of my Pulse Phenomenon.

It is well to always make it a rule to examine every patient by the two pulses, as very many obscure organic or functional heart conditions can be diagnosed thereby. This requires some practice but it can be easily acquired.



Fig. 30—Showing how one can take his own two pulses simultaneously. This figure shows the thumb of the right hand and the fingers of the left hand opposite the operator's eyes.

**Splanchnic Insufficiency** (relaxation of the splanchnic vessels) can be diagnosed by means of the two pulses, when taken in the manner illustrated and described.

To make this diagnosis often means to cure your patient's condition promptly, even after he has been the rounds of physicians far and near.

### SIMPLE METHODS FOR DEMONSTRATING THE ELICITATION OF THE MM VR ON ONE'S SELF

If a normal individual will go into a dark room, ground himself and face exactly east or west, and hold two conch shells over his ears he will hear a certain roar. If he will then slowly turn to face directly north or south, this roar will be modified more or less. This is caused by the change of tension in the middle ear.

If a person facing east or west (being in a dark room and grounded) places his two hands over his eyes and gives a light pressure not sufficient to produce any sensation of light, he will see a change of color before his eyes when he turns slowly to face north or south. This is caused by a change of tension in the ocular mechanism.

Fig. 30 shows how a person can take his two pulses at one time. If he is healthy and places his hands as illustrated while he is in a dark room, grounded and facing east or west,

he will notice a distinct pulsation in each wrist. As a rule, there will be a variation in the tension or height of the pulses. If he will slowly turn, facing exactly north or south, he will observe a change in his pulses. They will either both be

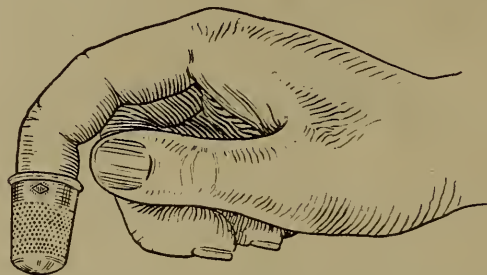


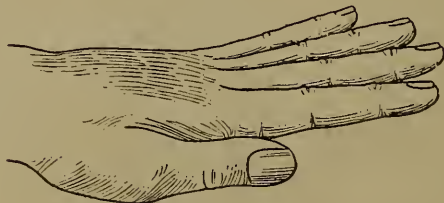
Fig. 31—The Plexor Thimble on Plexor finger. This loaded, celluloid thimble is used in Air-Column Percussion

equal or the one that was higher will be lower, or there will be some other change.

This experiment is a very good one for training the physician to use both hands simultaneously for palpation. It requires a little practice to be able to do this well, but it is worth while. This is more fully described on page 213.



WRONG POSITION



CORRECT POSITION

Fig. 32—Showing the wrong position and the correct position of pleximeter fingers for Air-Column Percussion

## AIR COLUMN PERCUSSION

### The Plexor Thimble—The Technic

Air column percussion is described on pages 23 and 24. The thimble referred to is shown in Fig. 31. Fig. 32 shows



how the fingers of the pleximeter hand are to be hyperextended.

Fig. 33 shows the manner of holding the hands in air-column percussion, and that is described on page 23.

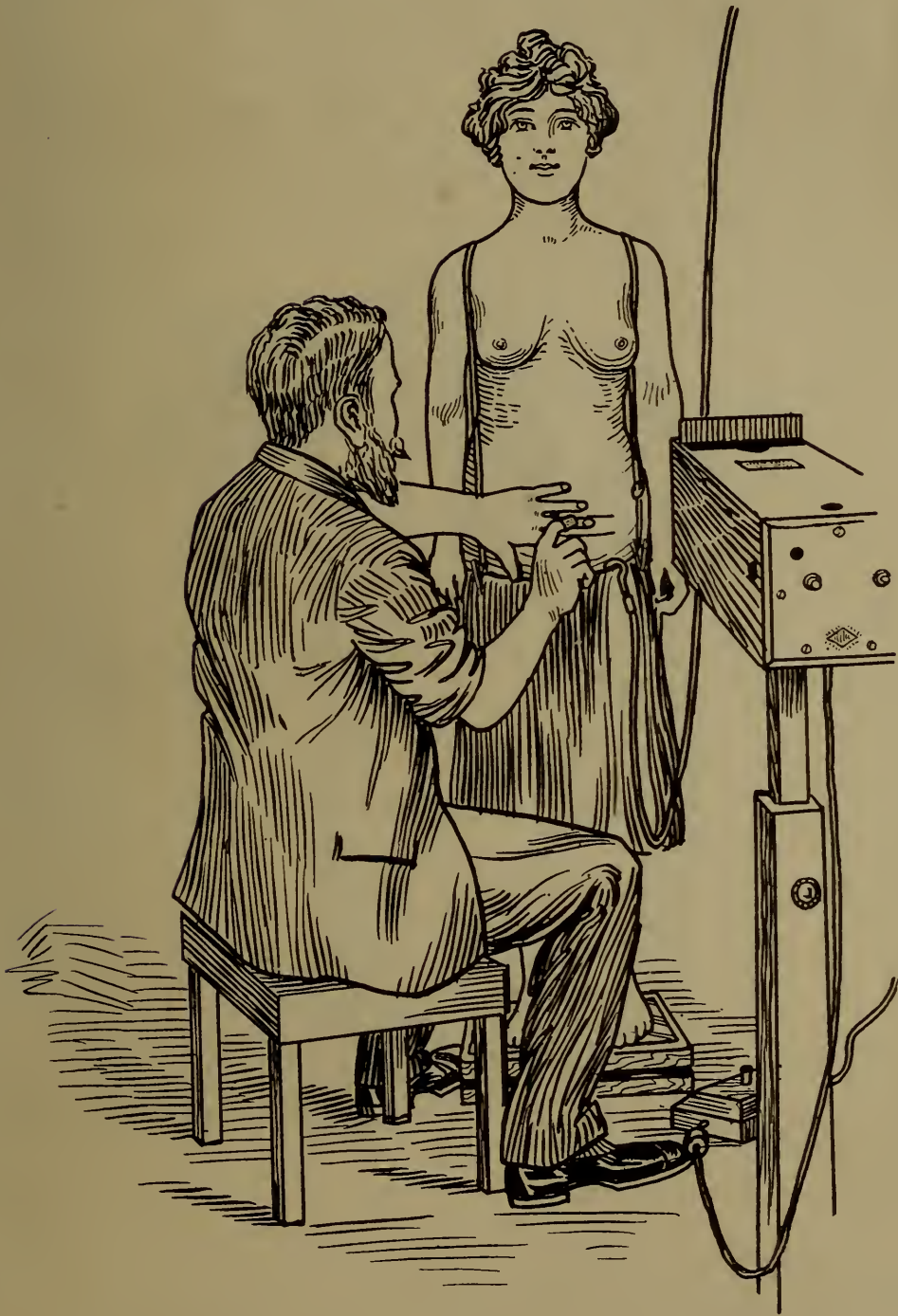


Fig. 33—Showing position of hands in using Air-Column Percussion for obtaining the Working-Line and the Reflex-Line

## WORKING LINE AND REFLEX LINE

### What They Indicate

Fig. 34 shows in detail how the working line, **W**, and the reflex line, **R**, on the left side may be on an entirely different level than the working line, **W**<sup>1</sup>, and the reflex line, **R**<sup>1</sup>, on the right side. The reason for this is described on pages 35 and 36. The greater the inefficiency of the splanchnic vessels, the greater the distance between the level of the working and reflex lines on the two sides of the abdomen.

Fig. 33 shows the manner of using my method of Air-Column Percussion in demonstrating the elicitation of the MM VR by means of the working lines and the reflex lines.

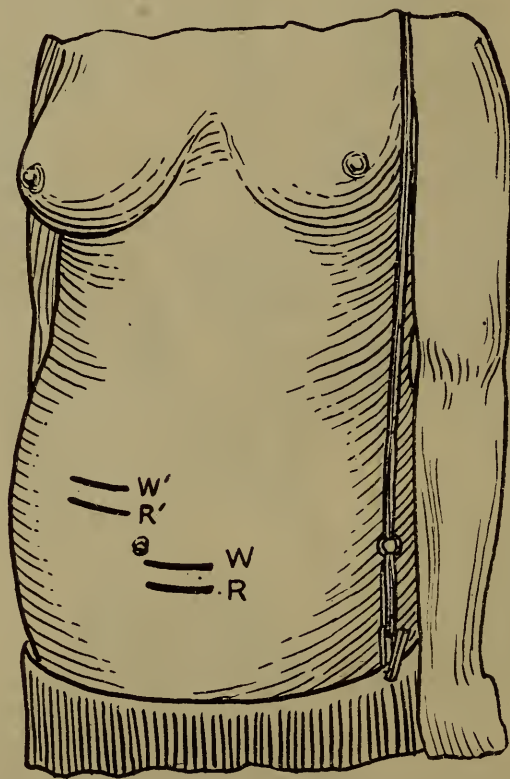


Fig. 34—Showing the difference of level between the lines on one side of the abdomen and the other—indicating Splanchnic Insufficiency

### Other Areas for Obtaining the Lines

On page 35 is mentioned the Working Line and the Reflex Line, as obtained in the **splanchnic area**. In my lectures I always mention the fact that these lines can be obtained in other parts of the anterior portion of the trunk and also over

some parts of the back. Probably the best place over the posterior region of the body to obtain these lines is over the renal area. Fig. 35 shows the position that the patient should be in to obtain this reflex. I have the patient lean over a chair while facing east or west and obtain the working line. Then I have them face north or south to get the reflex line. The effects of the MM upon the body while in this position are not as marked as when the body is upright, but by taking a little more time, the reflex may be obtained from the kidneys. This also is the position that I use in mapping out the **Morris Quadrilateral** described on page 240.



Fig. 35—Showing position for marking out Morris Quadrilateral or for demonstrating the elicitation of the MM VR over the renal region.

### VALENS VAGOTONOMETER

Fig. 37 illustrates this instrument.

Fig. 28 shows how I use this **Vagotonometer**. The two lines (A, Fig. 37) on the wooden tube are placed over the linea alba just above the pubes and the tube is struck a firm, staccato blow (with the felt hammer that is made for it) on the right side of the single line (B, Fig. 37.)

Keeping the tubular part of the instrument horizontal, and in close contact with the skin, move it upward until the maximum dulness in that area is reached.

If the abdomen is well dusted with French chalk or talcum powder, the tube will not stick to the skin and the movement upward can be made rapidly.

As soon as the maximum dulness in that area is reached, a line is drawn with the dermatograph (Fig. 38) on the under side of the tube.



The line that is obtained when the patient faces east or west is the **working line**, and the one obtained when they are facing north or south, if they are in good health, is the **reflex line**. (See pages 35 and 36.)

The lines obtained are the same with the Vagotonometer as with the thimble-finger, air-column percussion, which is explained on pages 35 and 36.

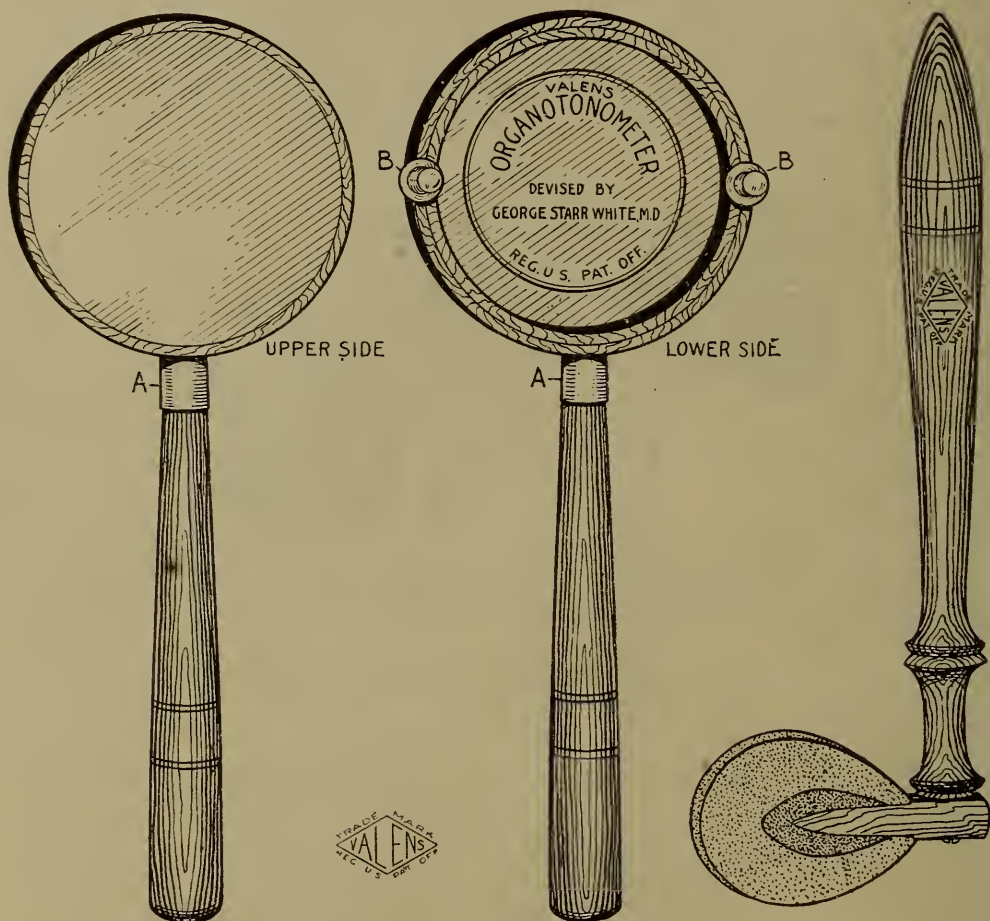


Fig. 36—Showing both sides of Valens Organotonometer and felt hammer used with it. A. is the shock absorber. B.B. are glass knobs.

The lines obtained with the Vagotonometer may or may not coincide with the lines obtained by air-column percussion with the finger, but they will show the same relative difference.

This Vagotonometer, being made of "violin wood" responds in direct proportion to the tension of the underlying tissues. The tube itself, being hollow and of the correct cal-



iber and thickness, gives an air-column vibration when it is in contact with the skin. This column of air is longitudinal, or parallel with the body. With the thimble-finger, air-column percussion, the air-column is perpendicular to the body.

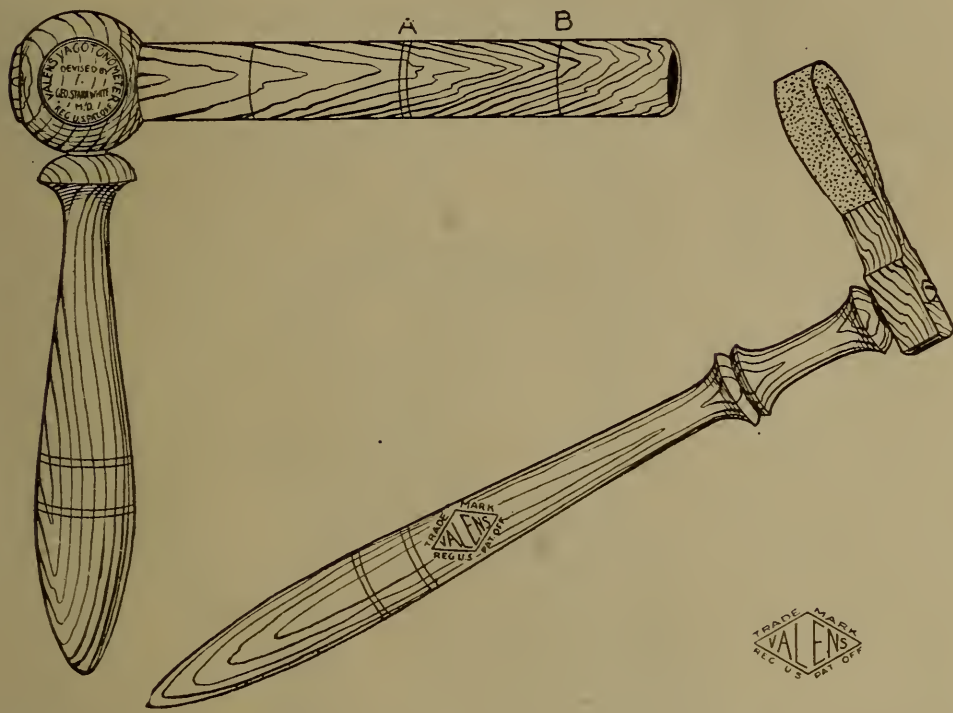


Fig. 37—Valens Vagotonometer with felt hammer used in operating it

VALENS ORGANOTONOMETER

Fig. 36 illustrates this instrument.

The use of the **Organotonometer** is described on page 34. Fig. 27 shows one manner of using it. It is grasped tightly in the left hand, with the hand resting on the shoulder of the patient so as to keep the instrument at a uniform dis-



Fig. 38—Showing a Dermatograph or skin-marking pencil. (The Am. Pencil Co.'s Venus 6B Drawing Pencil can be used in lieu of the imported Dermatograph.)

tance from the chest. The special felt hammer is then used for striking the Organotonometer on the Shock Absorber (A, Fig. 36).

(Fig. 27 shows a normal subject facing in the MM and the ruby light shining on her bare trunk.)

The Organotonometer is struck regularly about once a second while the ruby light is on. Then the ruby light is extinguished by pressing on the foot switch, and the striking of the Organotonometer continues. As the subject has a normal MM VR, the pitch will rise from one-half to three notes after the ruby light is extinguished.

This same phenomenon obtains if the subject is turned from east or west to north or south and the striking of the

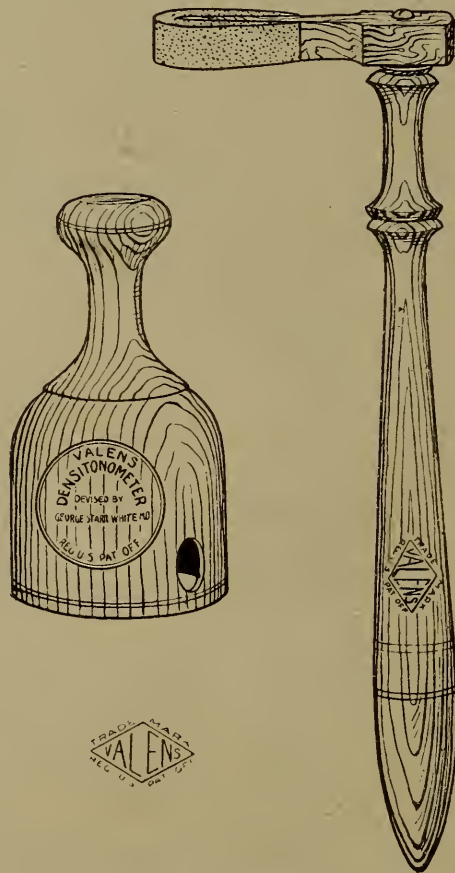


Fig. 39—Showing Valens Densitometer and the felt hammer used in operating it.

Organotonometer begins instantly after the body is turned facing in the MM.

If the subject has no normal MM VR and faces in the MM, the indicated radiant color will cause the pitch of the sounding Organotonometer to rise.

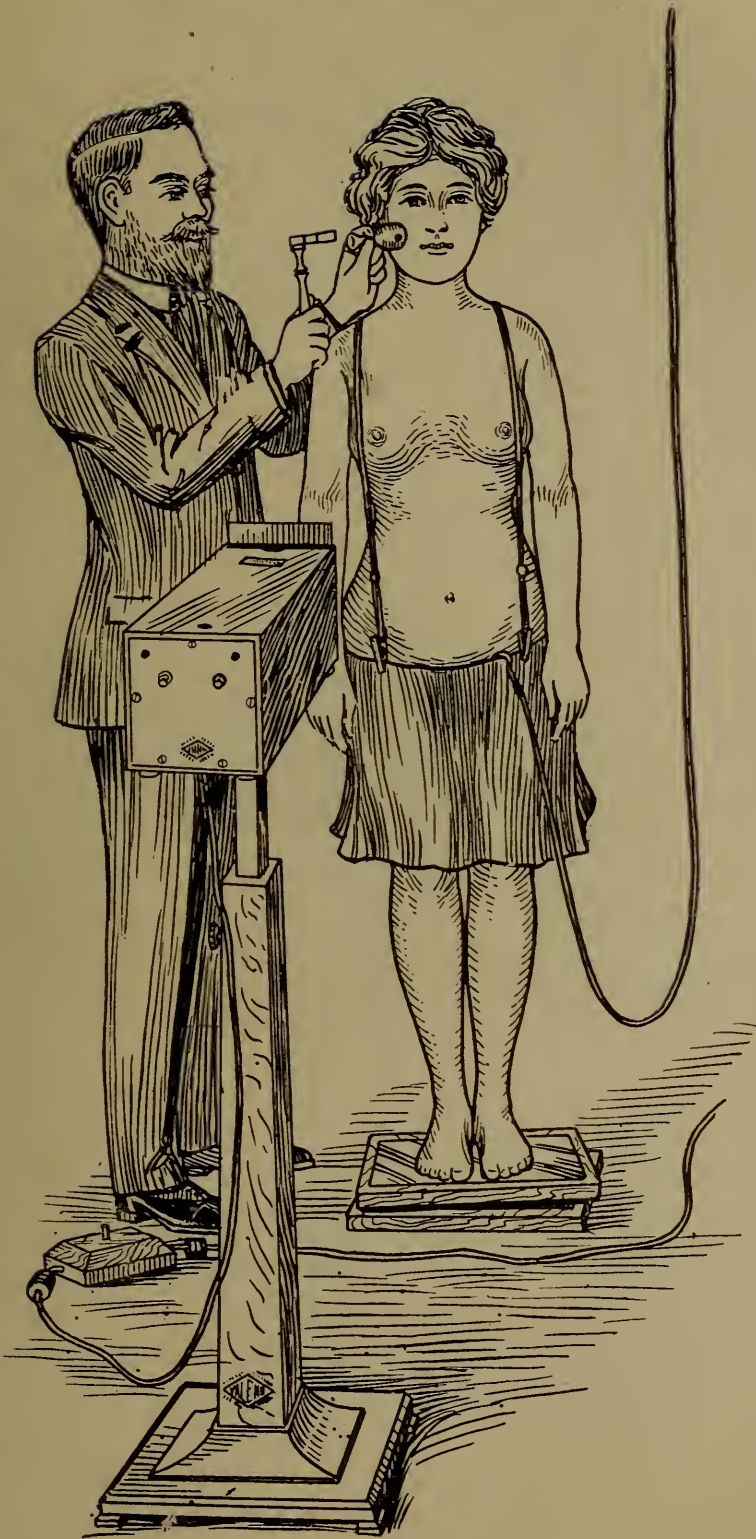


Fig. 40—Showing how Valens Densitometer can be used to demonstrate the Elicitation of the MM VR, or for comparing densities about head or body

## VALENS DENSITONOMETER

Fig. 39 illustrates this instrument.

Fig. 40 shows how the **Densitonometer** can be used over the face, chest, or any other part of the body for demonstrating the elicitation of the VR.

Fig. 40 shows the ruby light shining on the bare trunk of the patient while she is facing in the MM.

In using this instrument for demonstrating the VR, one must be careful to hold it with a uniform pressure against the skin.

This instrument is made of "violin wood." The column of air that vibrates inside of this Densitonometer finds its outlet in the vent hole (bleeder) at the side.



Fig. 41.—Showing Valens Super-Densitonometer. It is hollow thruout and magnifies sound in a remarkable manner. It is made to demonstrate changes of density. The same felt hammer that is used for the Valens Densitonometer is used with this.

The special felt hammer that is used with the Densitonometer is different than that used with the Vagotonometer or the Oganotonometer. Experience has shown that each instrument requires a different hammer.

This Densitonometer can also be used to compare densities about the head or body. For locating tumors or blood clots just under the tables of the skull, this instrument is unique. It can also be used over the sinuses about the face for diagnostic purposes.

Fig. 41 illustrates **Valens Super-Densitonometer**, which is made of violin wood and magnifies the tone. It is hollow thruout and is so shaped as to differentiate densities in a very remarkable manner.



## VALENS AIR-COLUMN TUBE

Fig. 42 shows a hard rubber tube with a piece of raw-hide very tightly lashed to the top end. In the tube is a tubular nipple to which is attached aural pieces from a stethoscope.



Fig. 42—Showing the use of my Air-Column Tube to demonstrate the Elicitation of the MM VR

This piece of rawhide is vibrated with the same style of hammer as is used with the Densitometer, or by the thimble-capped finger. When this is placed over the body as shown in this figure, and this piece of rawhide is gently tapped, there will be a change in pitch when a normal person is turned from facing east or west to north or south.

My early experiments along these lines were done with a lamp chimney with a nipple blown in the side.

This method of demonstrating the elicitation of the VR is not as a rule as pronounced as when using the Organotonometer.

One very interesting experiment with this Air-Column Tube is worthy of attention. With the ear pieces in place and the tube put over the drum head in the same manner as shown in Fig. 46 it will be noticed that the pitch of the air column vibrated in this tube varies with the tension of the drum head.

## THE SOUND OF MUSCULAR CONTRACTION— PHONO-MYOCLONUS

When the physician uses the sethoscope to auscultate heart or chest sounds, he seldom realizes that the very contact of his fingers with the stethoscope produces a "roar." This roar can be heard if the fingers are pressed tightly into the ears (muscular tension), but it will not be heard if the ears are plugged with something else than living tissue. (The roar obtained by a conch shell placed over the ears is not a muscle roar but the roar of vibrating columns of air.)

In 1898 Walter E. Scott, M.D., of Adel, Iowa, (as recorded in the Austin Flint Medical Journal), demonstrated that the roaring sound heard with the ordinary stethoscope over the heart was a muscle sound from the fingers and not from the heart.

Analagous observations were made by F. Sicuriani who described this phono-myoclonus in neuropathic subjects. Phono-myoclonus, however, was first described by Bernabei in 1903, who described it as a "rumbling" heard in the muscles of neuropathic individuals even when they were at rest. Scott's observations at that time were directed more to the

adventitious roar heard when auscultating with an ordinary stethoscope. Dr. Scott must be given credit for having made the most exhaustive study of adventitious roars in stethoscopes. In the Iowa Medical Journal of July, 1903, he had a very exhaustive article on this subject.

These adventitious sounds used to be considered a phenomenon produced by the circulation of the blood, but Dr. Scott's experiments prove that is not true, but that the sounds are from **muscle contraction**. These experiments can be easily duplicated by anyone interested.

When using the ordinary stethoscope, the only way this adventitious roaring sound can be overcome is to apply the stethoscope without the contact of the fingers. It can be suspended from the ears or by applying it by means of a belt or other device to hold it in position.

This stethoscope is of inestimable value in diagnosing peculiar conditions, especially in neurotics. The condition described by Sicuriani and Bernabei cannot be ascertained by the ordinary stethoscope. No phono-myoclonus or sound of contraction of muscles can be heard thru this Non-Roaring stethoscope by mere contact of fingers, when holding it.

When any muscles are put under stress and this stethoscope placed over them, the roaring sound will be heard, but if the muscles are paralyzed and do not contract, no roaring sound will be heard. There are some neurotic individuals over whose abdomen one will hear a constant "muscle roar."

Physiologists say that the natural muscle contractions occur 19.5 times a second. Every stimulation of a muscle causes a vibration and every vibration can be heard with a suitable apparatus.

In man the sound of the vibration of the voluntary muscles seems to always give the same tone regardless of the thickness or length of the muscle. Therefore when we learn to recognize the "muscle roar" we need never be misled by its presence.

Fig. 6 shows Dr. Scott's Non-Roaring Stethoscope with a localizer on it and the finger and thumb being pinched on this localizer. The sound conducted to the ear by this ma-

neuver is like the roaring of a waterfall, and is the regular muscle roar. The intensity of the roar is increased by effort.

By means of a Dr. Scott's Non-Roaring Stethoscope with a localizer on it as shown in Fig. 6, any muscle can be heard while under contraction. For localizing chest sounds, this localizer is of great value.

One very simple manner of hearing the roar of one's own muscles is to plug the ears with cotton and forcibly contract the jaws.

### Auscultation to Demonstrate the Elicitation of the MM VR

I have had a great deal of experience with stethoscopes, having tried every new stethoscope I could find, and even making them myself. I wanted to find a stethoscope that



Fig. 43—Changing tension in Practice Drum to change pitch of organ-pipe vibration.

would record the sympathetic vagal reflex. The only stethoscope I have ever found that would meet my requirements and that would well demonstrate the sympathetic vagal reflex is that illustrated in Fig. 5 and known as **Scott's Non-Roaring Stethoscope**. This stethoscope is the invention of Dr. Walter E. Scott and is constructed so that no vibration



can be carried thru the fingers to the ear. This stethoscope is of great value in demonstrating the sympathetic vagal reflex, as shown in Fig. 6A.

## ORGAN PIPE VIBRATION

Fig. 4 shows one of my early methods of demonstrating the elicitation of the MM VR. In experimenting with air-column vibration, I made whistles and pipes of all sizes and dimensions, and blew them while placing the large end over various substances. I found I obtained a different pitch or quality of tone, depending upon the specific gravity of the substance over which the vibration was made. When doing this over the body, I obtained a different tone when the body was facing east or west than when it was facing north or south.

By standing on a revolving platform and continually blowing on these pipes, as illustrated in Fig. 4, a change of pitch will be observed as soon as the healthy individual faces in the MM. Fig. 43 shows the same experiment when the pipes are blown over the Practice Drum. As the tension within the drum is changed, so will the pitch change.

Shedding the ruby light on the bare trunk of a normal subject while they are facing in the MM lowers the tone the same as if the body were facing east or west.

My large revolving platform that I use for experimenting in this work can be turned by a motor and reversing capstan, or by pulling on guy ropes, A and B, Fig. 4. This turntable I have used in all of my experimental work, but it is too large to be practical for regular work. The small one, Figs. 12 and 13, answers the purpose for diagnosis.

## VALENS PRACTICE DRUM

Fig. 3 represents my aluminum Practice Drum, which is described on pages 24 and 25. **A** is a perforated screw lid. **B** is a specially prepared vellum. **C** shows the screw threads on which to screw the lid. The mouth-piece is glass.

The manner of using my Practice Drum is described on pages 24 and 25.



Fig. 44—Showing the use of Valens Practice Drum in practicing with the Valens Vagotonometer. Other end of rubber tube is held in operator's mouth and the change in density of drum-head is altered at will.

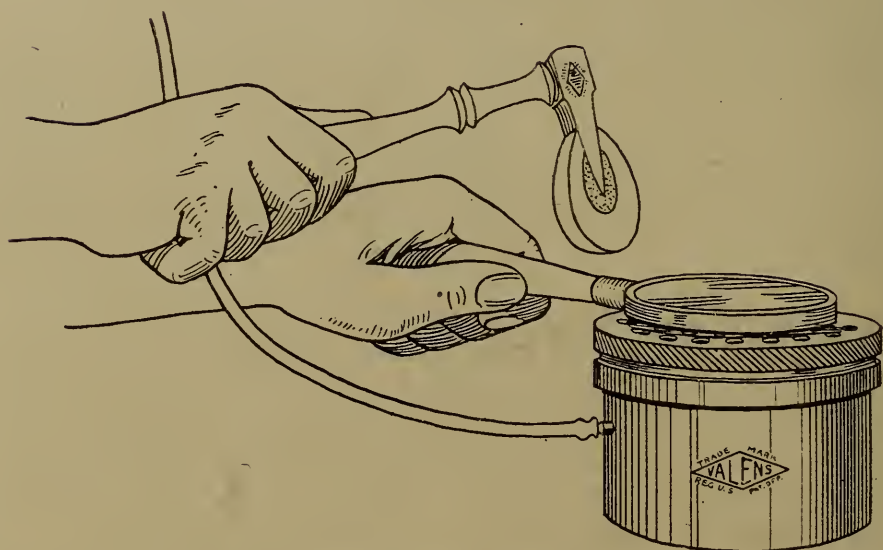


Fig. 45—Showing the use of Valens Practice Drum in practicing with Valens Organotonometer

Fig. 44 shows how the Vagotonometer is used over this Practice Drum for cultivating the technic and training the ear.

Fig. 45 shows how the Organotonometer is used over this Practice Drum.

Fig. 46 shows how the Densitonometer is used over this Practice Drum.

Fig. 43 shows how it can be demonstrated that the pitch of the Organ Pipe changes by changing the tension in the Practice Drum.

This Practice Drum is also used for cultivating thimble-finger Air-Column Percussion, as shown in Fig. 47.

By means of this Practice Drum, the ear can be very quickly educated to the change of pitch.

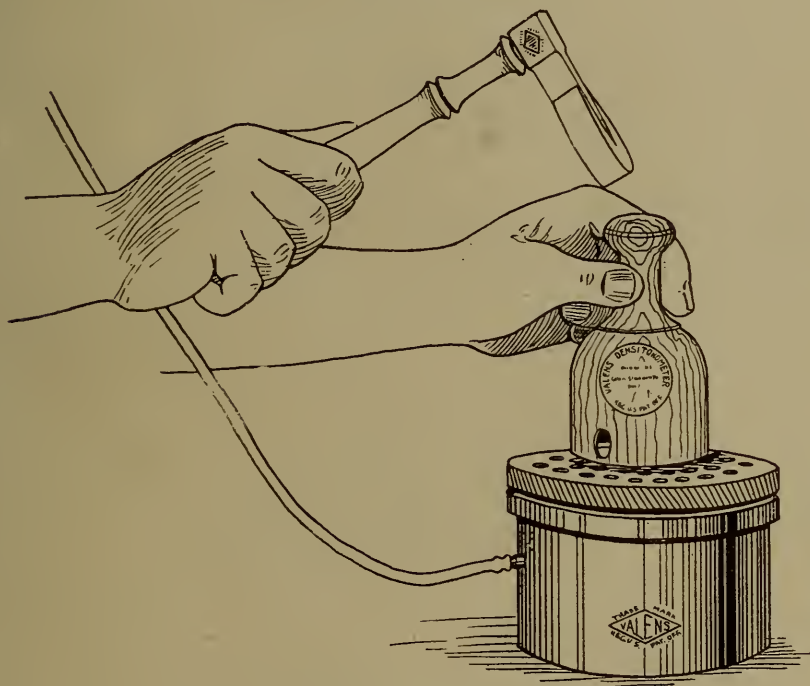


Fig. 46—Showing the use of Valens Practice-Drum in practicing with Valens Densitonometer

It is also very useful for demonstrating to a patient just how this work is carried on.

I made drums of all shapes and of all kinds of materials before settling upon this style. It will be noticed that the top of the drum (A, Fig. 3) is made of perforated metal. This helps to differentiate tones. The vellum drum-head (B, Fig. 3) is of the same material as that in Valens Organotonometer.

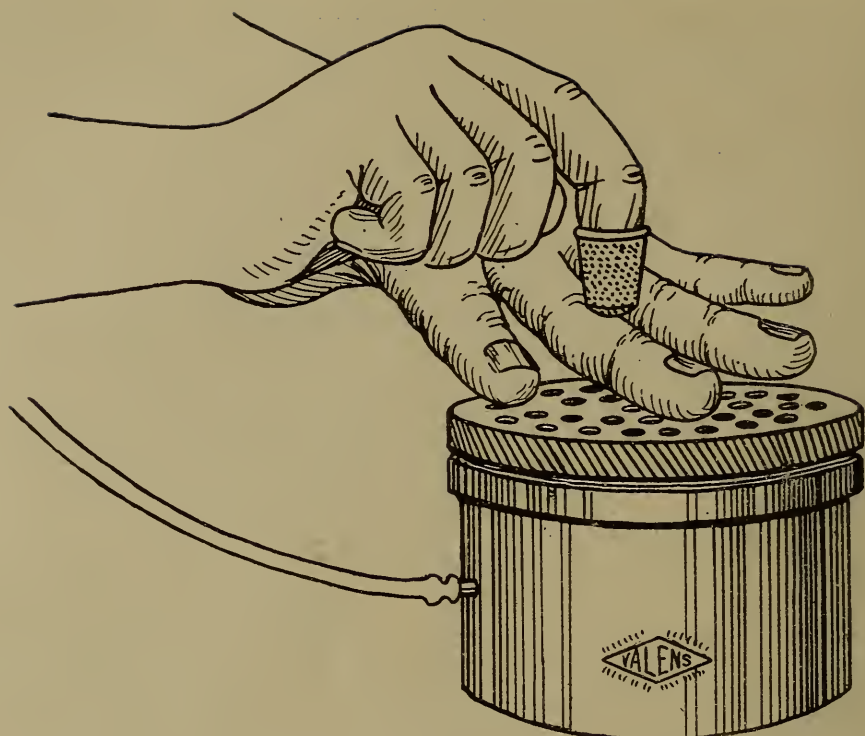


Fig. 47—Showing the use of Valens Practice Drum in cultivating Air-Column Percussion technic. Notice how the fingers of pleximeter hand are hyper-extended and far apart. The other end of the rubber tube is held in operator's mouth and tension of drum-head changed at will.

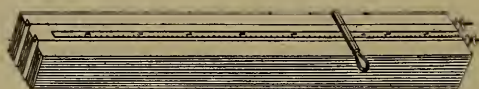


Fig. 48—Showing my early home-made Sonometer for differentiating pitch in air-column vibration

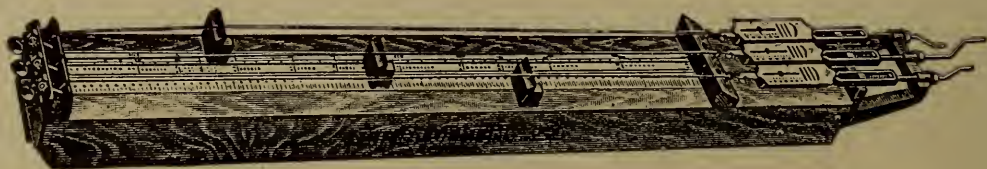


Fig. 49—Showing Prof. B. E. Smith's style of Sonometer. C. H. Stoelting & Co. of Chicago built this one for me.



## THE SONOMETER OR TONE MEASURE

Fig. 48 shows one of my early forms of sonometers, which I personally made for checking up the change of pitch in air-column vibration over the body or any other medium.

Later I used the more improved sonometer, designed by Prof. B. E. Smith, and shown in Fig. 49. The use of this instrument is fully described in standard books on physics.

A violin in the hands of a person with a well-trained ear is the best sonometer for demonstrating just the change of pitch that takes place in air-column vibration. C. H. Stoeltz & Co., of Chicago, make a wooden bar xylophone, which checks up the change of pitch fairly well.

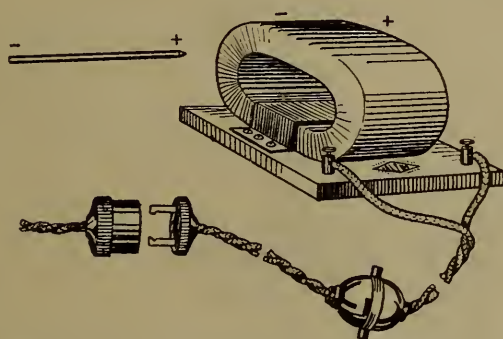


Fig. 50—Showing Valens Solenoid and a small steel bar just taken out of the active Solenoid. Notice that the polarities of bar and solenoid are identical.

For carrying on this work it is not necessary to use a Sonometer of any kind, but I did it in my research work so as to know just what was taking place.

Another method I formerly used for demonstrating the change of pitch was by using a specially constructed sounding board with fine strings over it, each varying in pitch one-quarter tone. These strings would vibrate when a sympathetic note was struck; and by training the ear I was able to tell just what change took place.

## MAGNETICS

On pages 14, 15, 16 a few of the essentials in magnetics are mentioned.

Fig. 50 shows a **solenoid** being used as described on page 14.

Fig. 51 shows how a large bar magnet can be used in making a small magnet, as described on pages 14 and 15.

Fig. 52 shows an **improved magnetometer** which is for measuring the magnetic intensity of a magnet, as described on pages 15 and 16. **M** represents one of my small diagnosing magnets.

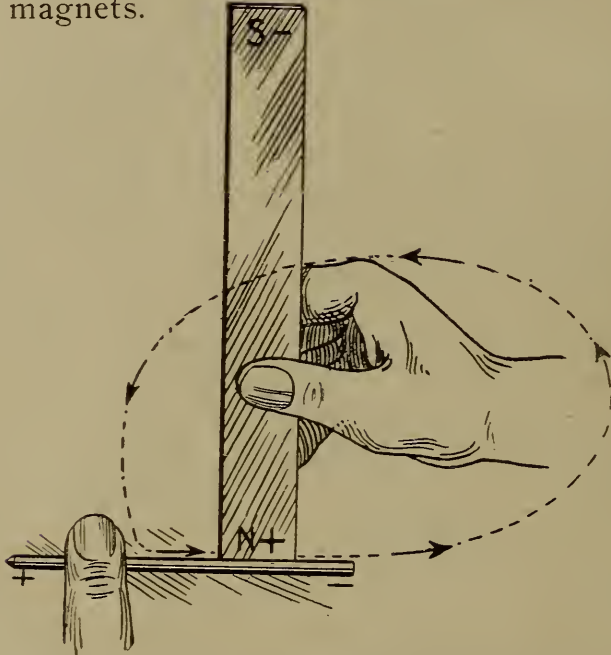


Fig. 51—Showing a large bar magnet being used to magnetize a small steel bar. Notice direction of stroke and polarities of the metals.

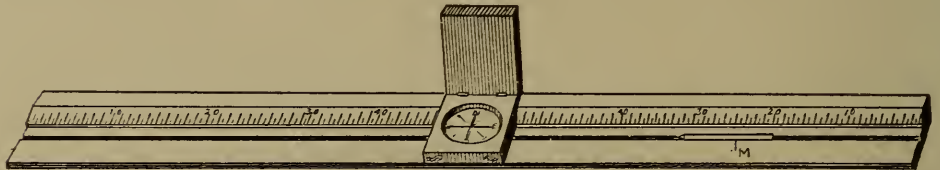


Fig. 52—Showing a Magnetometer of improved type. **M** is a small bar magnet pointing at right angles to the magnetic meridian.

Fig. 53 shows a **simplified magnetometer** which for practical use is just as good as the more elaborate ones. The measuring ruler is so placed that it is directed exactly east and west, and the magnetized metal is pushed along the measuring ruler until the needle is seen to move. That demonstrates the **magnetic intensity** in inches or millimeters. In using the measuring ruler in this manner, care should be taken to so place the magnetized metal that it is at right angles to the free end of the magnetic needle.

Fig. 53 shows a standard **bar compass**. This style of compass is superior to the needle variety. The latter is more delicate, but not so steady.

Another variety that is very good is that in which the whole dial revolves, similar to a mariner's compass. Of course the longer the needle or magnetic bar is, the more accurate the measurements can be made. For my laboratory work, I designed a compass with a specially made needle six to twelve inches long poised on a fine point set in a jewel and protected from the air currents by a glass cover (Fig. 54). By using such a magnetized needle over a graduated background, the deviation of the fraction of a degree is easily discernible.

### Making Magnets

On pages 14, 15 and 16 is mentioned the manner of making magnets and proving their polarity. Fig. 51 shows how

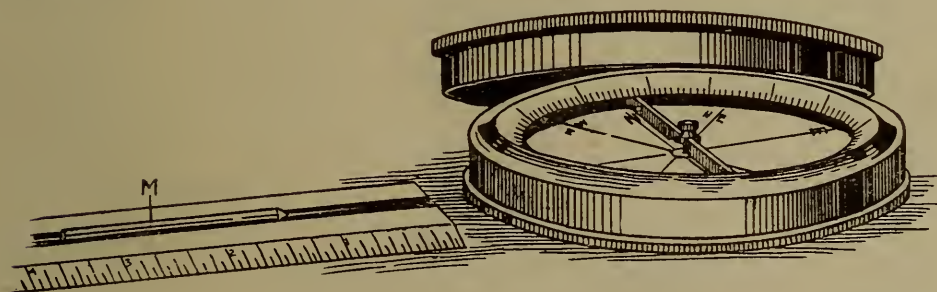


Fig. 53—Showing a standard bar compass and a grooved ruler directed east and west. *M* is one of my diagnosing bar magnets.

to make a small diagnosing magnet and illustrates what is said on that subject.

Fig. 50 shows my specially constructed solenoid that I use for making magnets and for demagnetizing watches. By means of a solenoid one can prove the polarity of the earth in a very simple manner. Some physicists have disputed the following statements, but if they will make the test before criticising and do not find the facts as stated, I am ready to discuss the reason why.

By placing the terminals of a galvanic battery into water, one can tell which is the negative and which is the positive terminal. If one places those terminals in the posts of a

solenoid as indicated in the sketch and turns on the current, it will be found that one side of the solenoid will attract the north-seeking pole of a magnetic needle and repel the other. This is graphically illustrated in the sketch. The polarity of the sides of the solenoid will exactly coincide with the poles from the battery, as determined by electrolysis.

By placing a needle or small bar of steel in this solenoid, the end toward the positive side of the solenoid will be posi-

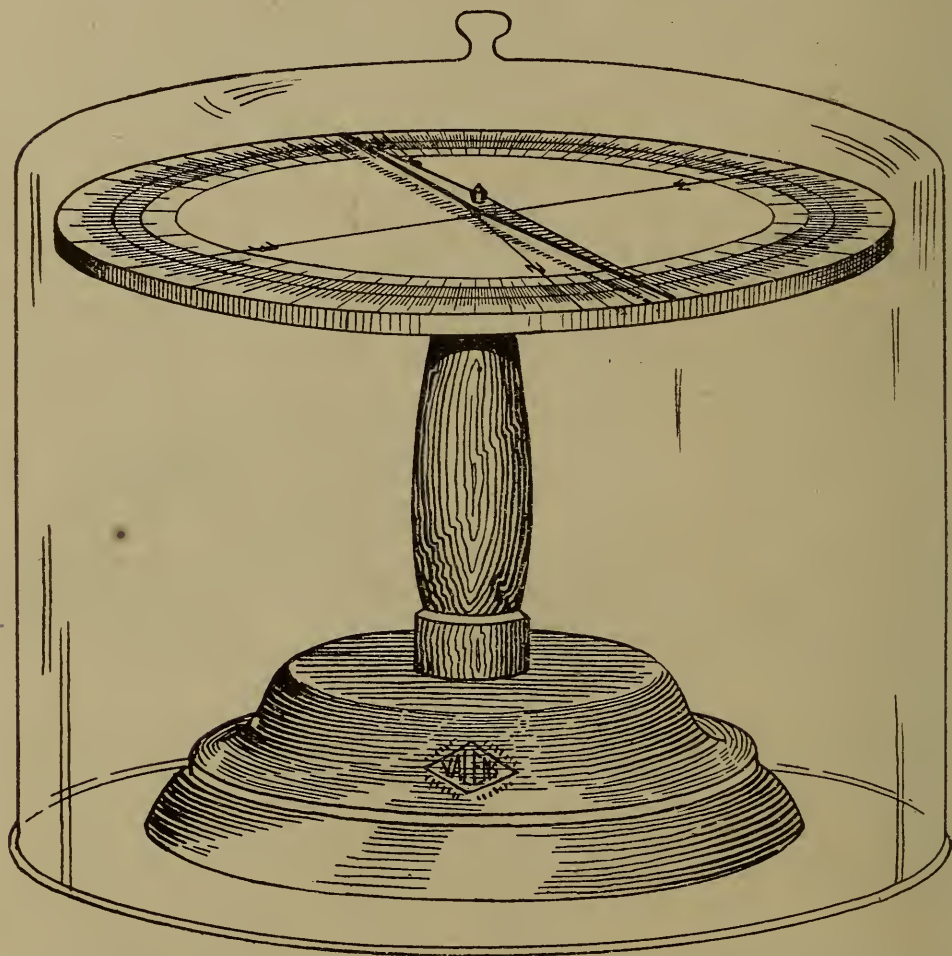


Fig. 54—Showing my laboratory magnetic needle covered with a glass jar. This compass will show fraction of a degree and is extremely sensitive and accurate.

tive and the end toward the negative side of the solenoid will be negative. This is just the opposite to what most physicists think. My explanation for it is that the lines of force travel continually and, surrounding the foreign body within the core, simultaneously make it an integral part of



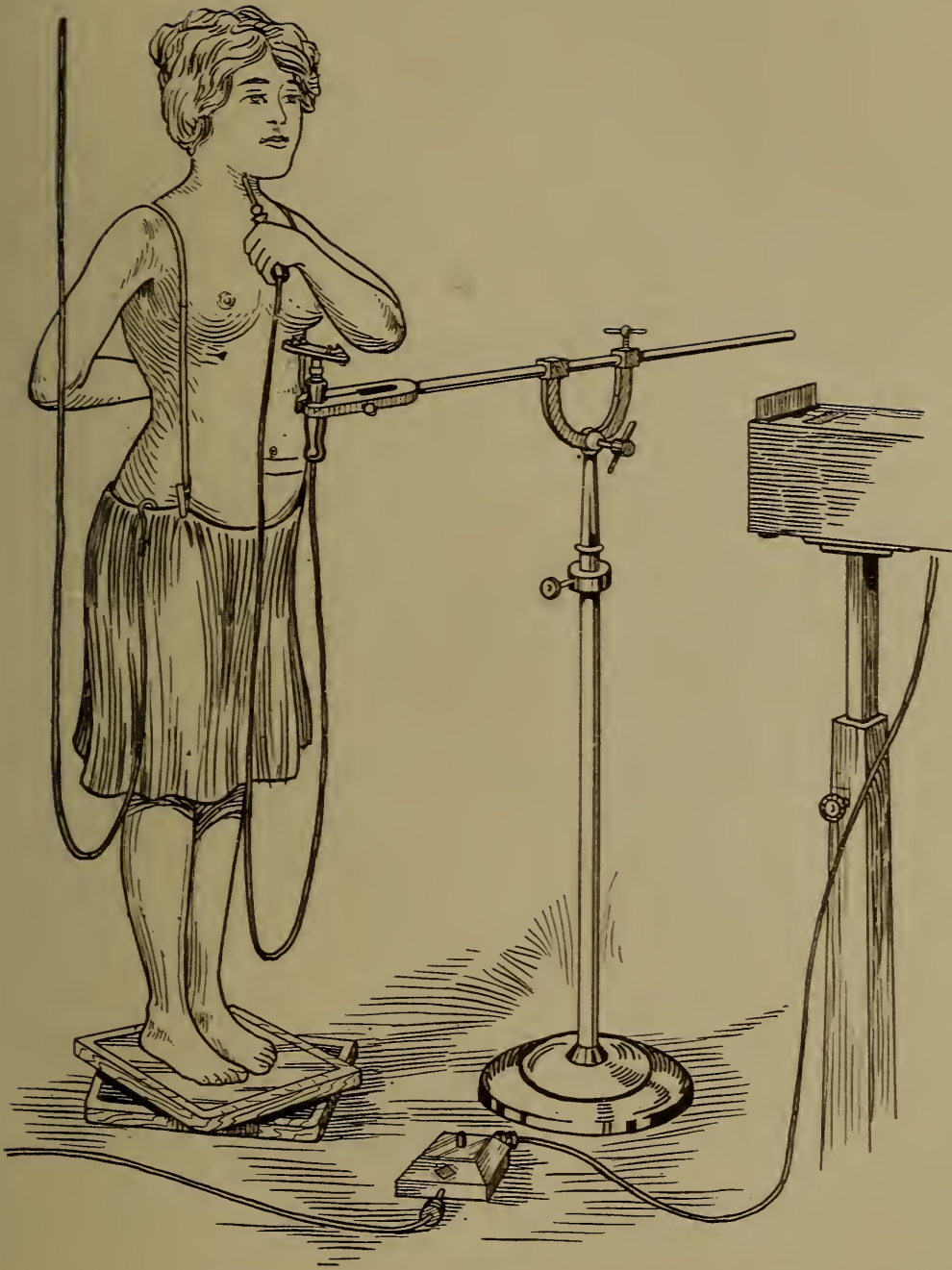


Fig. 55—Showing the use of the Valens Pole-Differentiating Energy Conductor in *Auto-Excitation*. Notice that the dispersing or subject-terminal is held in an ordinary x-ray tube holder. Notice position of the hand holding the receiving or patient-terminal.

the solenoid itself and do not make the poles opposite, as one would expect from using a bar magnet.

Altho there are more technical explanations for this phenomenon, this is the most simple.

Taking this piece of steel that has been magnetized and ascertaining which end of the magnetized needle is deflected, will tell us at once the polarity of the north or south-seeking pole of the magnetic needle and this in turn must tell us the polarity of the earth because like poles repel and unlike poles attract.

**To demagnetize a watch** we put an **alternating** current or a rapid sinusoidal current thru this solenoid and, while this current is passing thru it, place the watch within the core of the solenoid and draw it out slowly—the current remaining on. This demagnetizes a watch or any metal that is placed in like manner.

Remember that an **alternating current (AC)** therapeutically is called a **rapid-sine-wave current**, so the rapid-sine current from your office apparatus will do the same thing, but it may take a little longer.

## VALENS ENERGY CONDUCTOR

Pages 27, 28 and 29 describe the use of my Pole-Differentiating Energy Conductor. It is shown in Fig. 2.

Fig. 1 shows the evolution of this Energy Conductor.

Fig. 55 and Fig. 56 show how to use this Energy Conductor in auto-excitation, as described on page 27.

Fig. 57 shows how the same energy conductor is used in subject excitation, as described on page 27.

Observe that in both of these figures the subject is facing east or west.

The working line is first obtained with the patient or receiving-terminal away from the body. Then the patient-terminal is placed over the part to be diagnosed and the reflex line is obtained, if there is energy enuf to elicit the reflex. (The Organotonometer, Vagotonometer, Densitonometer, or any other method of demonstrating the elicitation of the reflex, can be used for this as well as for any other of the work;

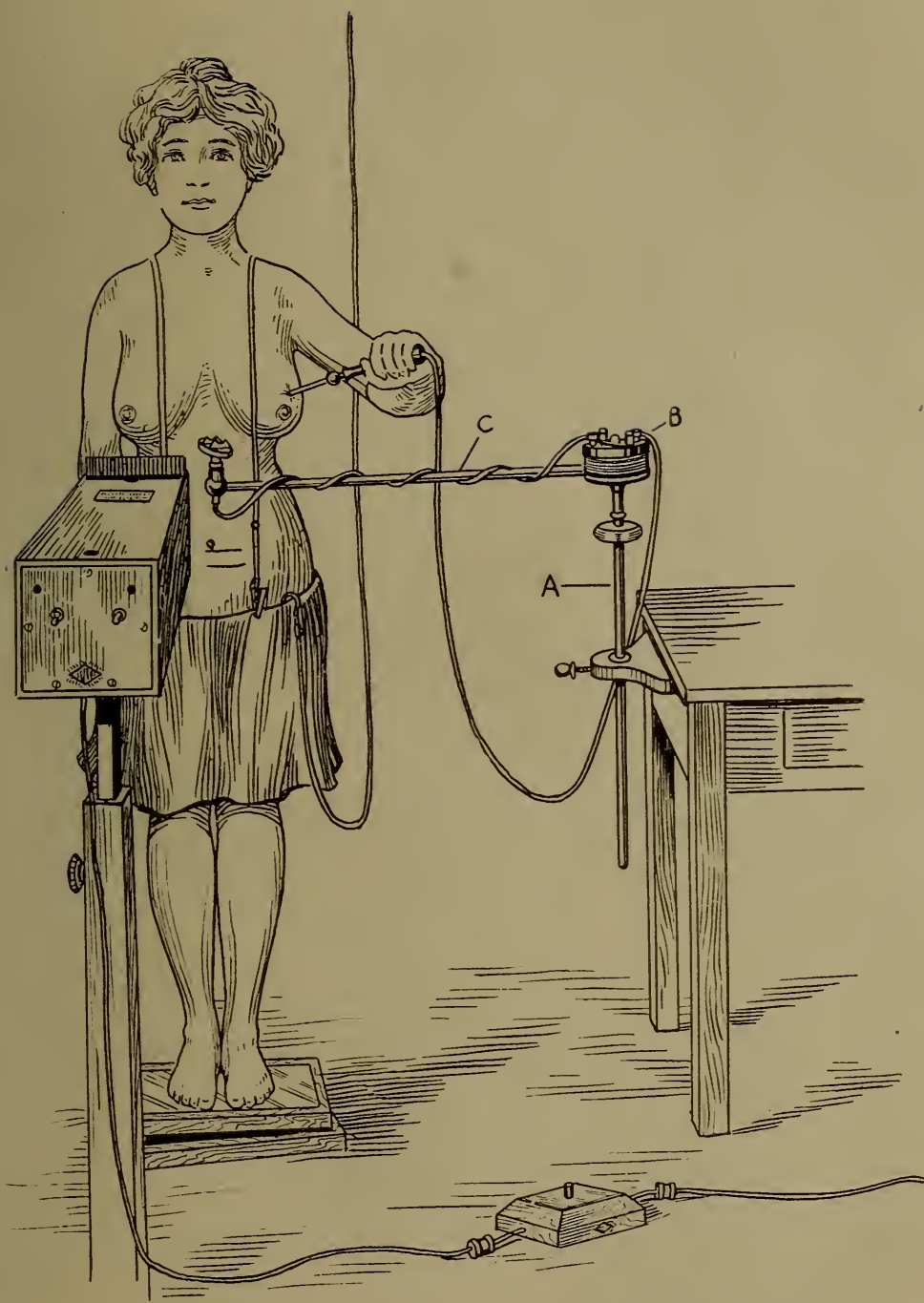


Fig. 56—Showing how I have the Valens Pole-Differentiating Energy Conductor arranged on a specially made bar and table for office use. A. is an adjustable upright. C. is a wooden arm attached to a metal swivel on top of upright. B. is my specially made Bio-Dynamometer or resistance measure. It is very sensitive and accurate.



but as a rule I find Air-Column Percussion, the Vagotonometer, or the Organotonometer to be preferable to other methods for this.)

After I have demonstrated the reflex, (VR). I then turn on the colored lights one by one, until I find the color that will **dissipate** the reflex. This color will be the same as will **elicit** the MM VR in the individual if the lesion is of a tuberculous, cancerous, or other malignant character.

If this conduction of energy is done solely to determine the "polarity" of the body, or of any substance, the color of



Fig. 57—Showing Valens Pole-Differentiating Energy Conductor as used in *Subject-Excitation*. Notice the position of the hands in holding the terminals. Notice that only the receiving or patient-terminal comes in contact with the skin.



the light that dissipates the energy will either be ruby or blue, or a combination of both; and the color will indicate the "polarity."

A diagnosing magnet can be used for differentiating "polarity" by placing the magnet holder, or shell, on the platform of the revolving, dispersing or subject terminal of Valens Pole-Differentiating Energy Conductor.

I formerly used the magnet for differentiating polarity more for experimental work and for inanimate substances than for diagnosing diseases. I now use my Chromatic Screens as I have found radiant color is more accurate for diagnostic purposes, as graphically shown in Fig. 7.

Fig. 55 shows the patient conducting the energy from the throat. If this is of tuberculous character, the reflex will be dissipated by means of the ruby light. In this figure the revolving terminal is held in a regular vacuum-tube holder or x-ray-tube holder, and the Bio-Dynamo-Chrome is placed facing the bare trunk of the patient.

In using Air-Column Percussion, the physician may sit between the Bio-Dynamo-Chrome and the patient, allowing the light to radiate by him, and have his foot on the switch to put the light on or off as he wishes.

Fig. 56 shows the patient conducting the energy from a cancerous breast. This energy will be dissipated by either the ruby colored light (A-Chromatic Screen) or by the cancer-differentiating color (B-Chromatic Screen). This figure shows the way I have the energy conductor arranged in my own offices, the energy being carried thru an energy-measuring resistance coil, which I call a **Bio-Dynameter** (Bio-Dynamo-Meter.)

Fig. 57 shows the patient seated and holding the patient, or receiving-terminal over a supposed tuberculous lesion in the right lung. The subject stands on the revolving platform facing the patient. Both are facing at right angles to the magnetic meridian. The working line has been obtained on the subject before the patient picks up the energy conductor. Now, when the receiving or patient-terminal is in contact with the skin over the lesion and the subject is holding the revolving, or dispersing terminal, the reflex line is obtained. The radiant color may be shed on the bare chest of either the

subject or the patient. The ruby light (A-Chromatic Screen) will dissipate the energy from a tuberculous or cancerous lesion, and the cancer-diagnosing color (B-Chromatic Screen) will dissipate it from a cancerous lesion but **not** from a tuberculous lesion. This shows how radiant colors are far more suitable for diagnosis than a bar magnet, as the same end of the bar magnet will dissipate energy from a tuberculous and cancerous lesion, but cannot differentiate one from the other.

I use this same method for differentiating the kind of pus that is present, whether it is streptococci or staphylococci.

Notice the method of holding the terminals for conducting this energy. The hands are so placed that they do not point toward the body.

Notice that the patient in each one of these figures is grounded, and that in Fig. 57 the subject as well as the patient is grounded. The patient may be lying in bed or sitting up, as long as the energy is being conducted to the subject, who must always be facing east or west.

#### **Note**

In taking the energy from a person lying in bed, I find it does not make any difference in which direction the head is pointing if they are lying on their back; but if they are lying on their side, their head should point north or south.

### **MEASURING THE ENERGY**

Pages 28 and 29 describe the method of measuring the energy. This is shown in Fig. 56, and also in Fig. 58. Fig. 58 shows how an ordinary measuring ruler can be used for measuring the energy.

The farther away the end of the patient, or receiving, terminal can be from the lesion being diagnosed and elicit the reflex, the greater the energy or activity of the lesion; and conversely, the nearer it has to come to the body to elicit the reflex, the less active is the lesion. In this manner we can gauge the progress of the therapeutic measures.

Fig. 56 shows how I use a specially made bio-dynamometer (**Valens Bio-Dynameter**) for this purpose, but I find

the air space method as shown in Fig. 58 is just as good from a practical standpoint as using an elaborate ohm, or resistance meter.

One of the first forms of bio-dynamo-meters I used for this purpose was an ohm meter, or resistance meter, made by winding resistance wire around a paper mailing tube and putting terminals on each end, over which I slid a connecting piece of metal.

My most recent as well as most accurate method of measuring vital force, or aura, is by means of **attenuated colors**. This is described under the head of Valens Chromatic Screens.

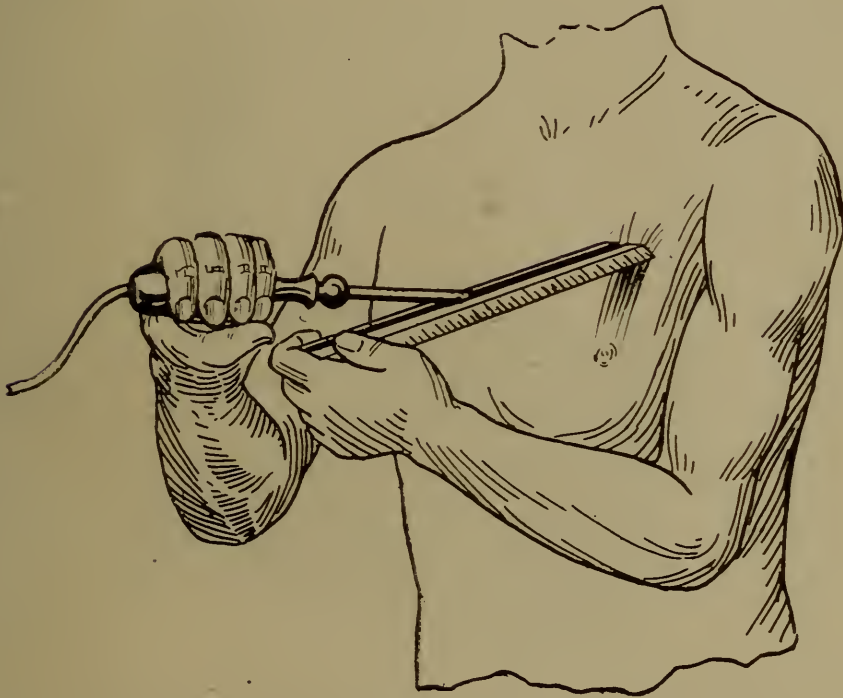


Fig. 58—Showing simple manner of measuring energy intensity. The farther the receiving or patient terminal is from the lesion when the energy will elicit reflex, the more active is the lesion

### SYMPATHETIC—VAGAL TONE AND BLOOD PRESSURE

Among the various methods for demonstrating the elicitation of the MM VR is mentioned the use of the "Psychophanometer" and the "Psychophanograph."

The name, Psychophanometer, was coined by Dr. F. M.

Planck of Kansas City, Mo., the roots of the name being psyche—the soul; phano—to shine; and metréo—to measure. Dr. Planck used a mercury sphygmomanometer with one contact wire and one electric light bulb to light when the mercury column raised. He showed and demonstrated this instrument before the Jackson Co. Eclectic Medical Society, Feb. 19, 1914.

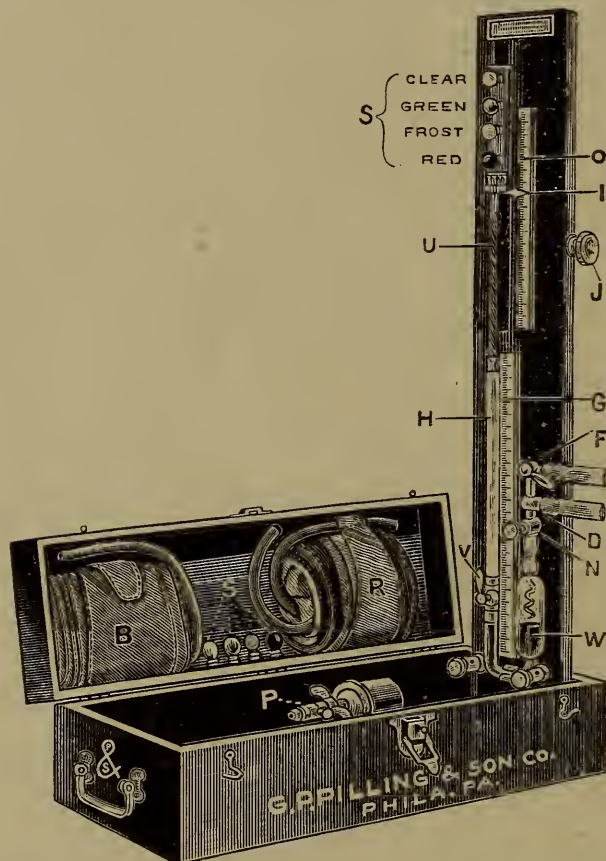


Fig. 59—Special Sphygmo-Manometer devised by me.

Altho I had never met Dr. Planck, I was working on a similar device at the same time and was on my way to Philadelphia to have the instrument made when my attention was called to Dr. Planck's instrument.

As far as I can ascertain, Dr. Planck was the first one to publish an account of an apparatus for showing the change in blood pressure by means of an electric light. A physician told me recently that he had seen in a clinic in London, Eng., an instrument for visualizing the excursion of the pulse by



means of electric lights, but I could not find out the name of the doctor holding this clinic.

Dr. Planck's first instrument was very simple. Since then he has devised the psychophanograph, which is a very unique and ingenious instrument. By means of an inked stylus it shows the change of both pulses simultaneously, as well as lighting electric lights. This newer instrument, which he has devised for research work, utilizes a rubber diafram rather than the mercury column. The principle is similar to that used in the standard cardiographs. By means of a sensitive set of levers he makes the electric contacts.

My design (Fig. 59) was made to utilize the Pilling-Faught Mercury Sphygmo-manometer. It is now manufactured by G. P. Pilling & Son Co. of Philadelphia. It is an elegant and practical instrument for demonstrating blood pressure to a class or an audience, as the upright can be hung on the wall where the whole audience can see the lights. For many reasons this White-Pilling-Faught instrument has no equal for office use.

### Description

The box is of quartered oak and has a lock and handles on the lid and on the upper end. It contains extra lamps and an extra battery cell, an air pump, and tubing of special length.

The upright standard automatically makes contact with a dry cell in the box, when it is placed in an upright position. It is easily removed from the upright position and laid flat in the box for carrying. Cushioned posts are on the lid so as to hold the standard firmly in place. The stop-cock **V** and special manometer **W** prevent the mercury from running out. The standard can be suspended on a wall, and electric wires from battery cells fastened to the binding posts at base end of standard.

Four insulated wires **U** are bound together and with bared ends are placed in the mercury column tube **H**. The outside ends of the four wires are fastened to a lamp carriage and each one connected by a hidden wire to each of the four lamp sockets **S** in same. **J** is a milled screw connected to a hidden rack and pinion for moving the lamp carriage up and

down. **G** is a sliding scale for measuring blood pressure in millimeters, as well as the excursion of the mercurial column. It is graduated up to 300 mm. There is also a sliding scale **O** with pointer **I** on the lamp carriage so the index can be made to correspond with that on the mercury column tube. **P** is the pump. The stock-cock **F**, lets the air in from the pump. **R** is the standard cloth arm band over a rubber bag. **B** is a

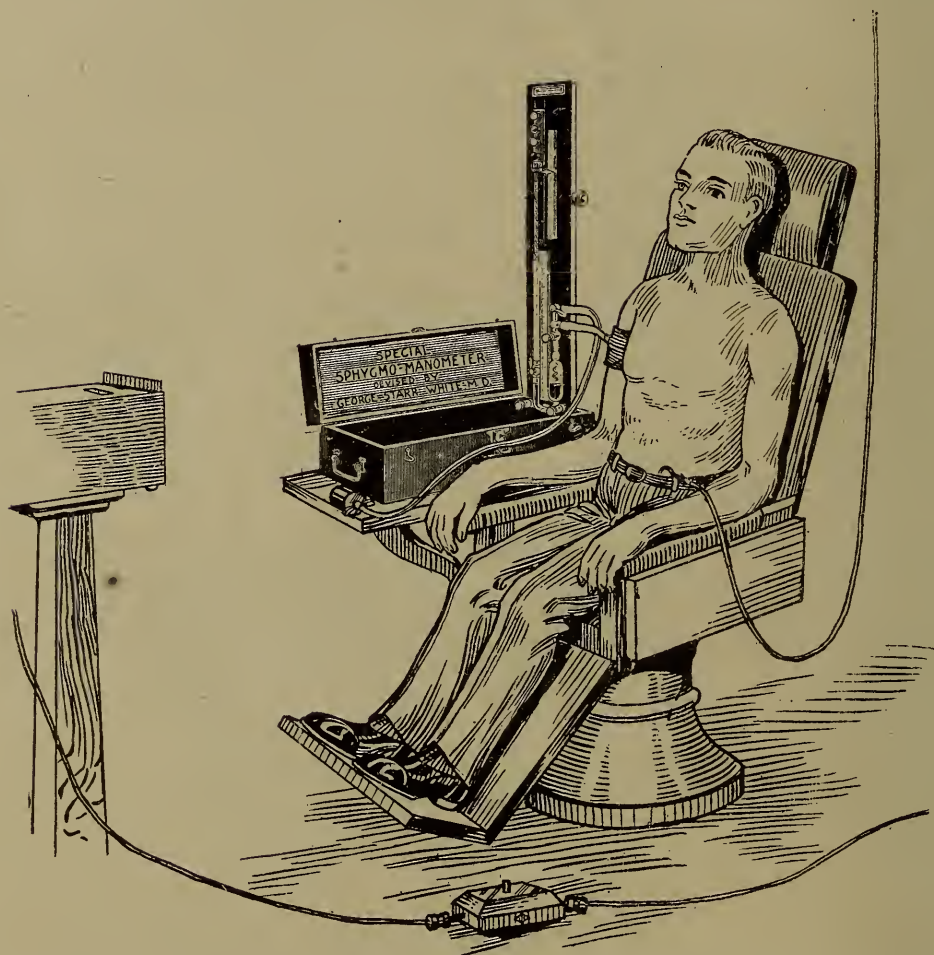


Fig. 60—Showing how my special Sphygmo-Manometer is used to demonstrate the elicitation of the MM VR

heavy leather abdominal band covering a rubber bag, which is used over the stomach region. **D** is the connection for the air bag. **N** is the air-release screw.

Hidden wires come thru from the back of the standard so as to be in contact with the mercury when it is in the glass tube. These hidden wires are so arranged that they are attached to binding posts or contact pieces, that are in contact

with a battery cell. All the lamps, manometer, and the mercury column are in series when the mercury touches the bared extremity of the wires in the mercury tube. According to the contraction or expansion in the air bag, the column of mercury rises and falls and so lights one, two, three or four lamps. These lamps are of different colors to quickly show the variation in pressure. The lowest or first light is red; the second, white or frosted; the third, green; and the fourth, bright. The wire lighting the second lamp is 2 mm. higher than the first, the next is  $1\frac{1}{2}$  mm. above that, and the next is 1 mm. higher than the other.

Fig. 60 illustrates how this Special Sphygmo-manometer can be used for demonstrating the elicitation of the MM VR. I put a normal, healthy person in a dimly lighted room and ground him. The instrument is attached as shown in the illustration. While he is facing exactly east or west, I adjust the instrument so the lower light just lights at each pulsation. I then slowly revolve the chair until he is facing exactly north or south. As soon as that point is reached, there will be a change in the pulse, as will be demonstrated by the change in the lights on the upright. This is a beautiful demonstration of the elicitation of the MM VR.

While this normal person is facing exactly north or south, if a ruby light is shed on him, the lights on this Sphygmo-manometer will show the same as when he was facing at right angles to the MM, i. e., east or west.

Page 31 describes what takes place in the blood pressure during this maneuver. While a normal individual is facing in the MM and grounded, there will be a difference in the blood pressure when the ruby light is shed on the bare chest or when it is extinguished, if the patient is in a very dimly lighted room.

For taking the blood pressure, which I do with every new patient, I use this instrument and take the pressure while the patient is facing east or west, and make the records accordingly.

This instrument is more sensitive than the ordinary mercury sphygmo-manometer.

Altho I have used all kinds of sphygmo-manometers of the aneroid type, I think the mercury column style is the more



accurate, altho it is not as convenient as the other kind. G. P. Pilling & Son Co. of Philadelphia manufacture a folding, or pocket mercury sphygmomanometer which appears to be the best of its kind.

### VALENS CARDIO-RELAY INTERRUPTER

Fig. 61 shows a patient with my specially constructed Cardio-Relay Interrupter attached over the heart. This device is so sensitive that the beat of the heart will intermit a



Fig. 61—Showing how the Valens Cardio-Relay Interrupter can be used to visualize the elicitation of the MM VR

110-volt lamp that is shown in the figure. This lamp must be masked. The patient is grounded and the trunk bare. The room is quite dark.

Revolving the patient from east or west to north or south will change the meter of the beats of the heart, as is



demonstrated by the difference in the intermittence of the light.

This is an extremely sensitive apparatus and very expensive, and I had it made only for research work. It is not practical for diagnostic work as it takes so long to adjust it.

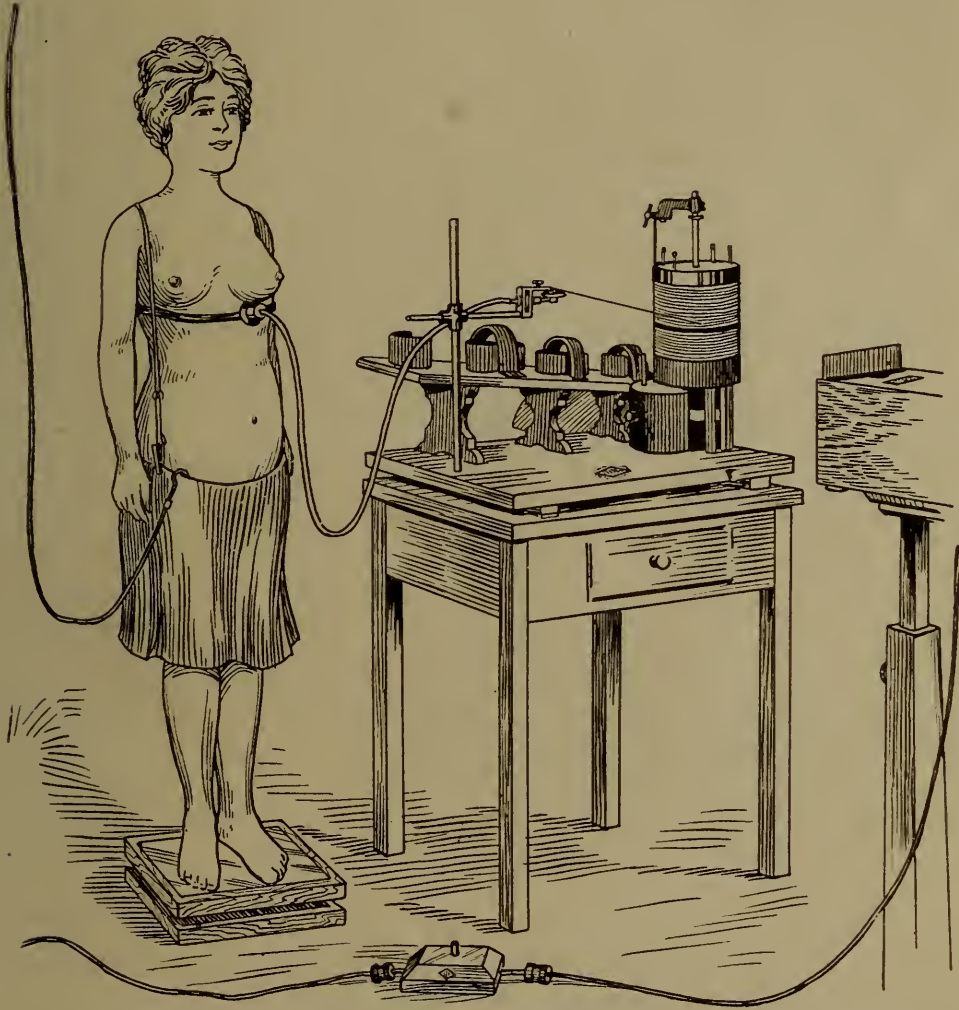


Fig. 62—Showing the Valens Cardio-Kymograph in use to record the Elicitation of the MM VR. This same instrument is made to hold the Valens Plethysmo-Cardiograph illustrated in Fig. 63.

### VALENS CARDIO-KYMOGRAPH

Fig. 62 shows the use of my specially made Cardio-Kymograph attached over the heart of a subject. As this healthy subject is revolved from east or west to north or south, the change of pressure in the tambour elevates or

lowers the very long stylus, as is recorded on the revolving drum.

The figure shows the stylus in position when subject is facing east or west. As she is revolved to face in the MM, the stylus will rise to the top of the drum and then gradually recede as the reflex becomes dissipated.

### VALENS PLETHYSMO-KYMOGRAPH

Valens Cardio-Kymograph is made to work in connection with a **Plethysmograph**, as shown in Fig. 63. This Plethysmo-Kymograph registers the tension in the capillaries and as the vessels dilate, the water in the glass receptacle is compressed and is transmitted by means of the air-tube to the tambour. That operates the stylus which records the change on the revolving drum.

This is also a very elaborate outfit, and I have used it only for research work.

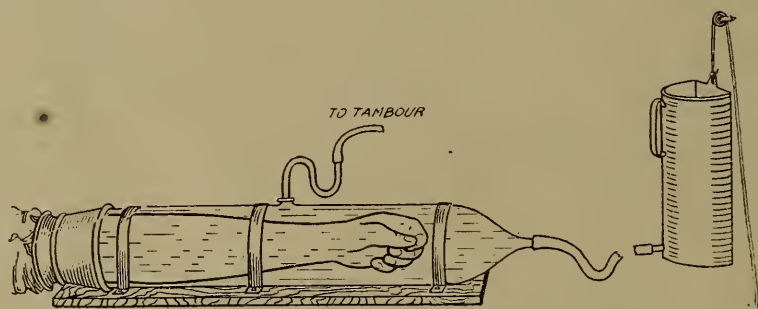


Fig. 63—Showing Valens Plethysmograph to be used in conjunction with the Kymograph outfit shown in Fig. 62.

In using the cardio-kymograph or the plethysmo-kymograph, or any of the other recording instruments, the patient as well as the table on which are placed the instruments and Bio-Dynamo-Chrome, should be on a large revolving platform operated by an electric motor, as shown in Fig. 4.

### DEMONSTRATION OF THE MM VR BY MEANS OF A RESONANCE TUBE

Fig. 64 represents a Resonance Tube which I used in my early experiments for demonstrating the elicitation of the sympathetic-vagal reflex. It consists of an upright to which

is attached a glass tube. To one end of the glass tube is attached a rubber tube with a small glass bell jar on it. Over this resonance tube a tuning fork is rigidly placed.

When this glass tube is partially filled with water and pressure is made over the bell jar, the level of the water in the tube is changed. A vibrating tuning fork over this glass tube will accurately demonstrate the minutest change in the height of the liquid in the tube, even when the naked eye cannot detect it.

When the bell jar is placed over the bare abdomen or chest of a healthy individual, who is grounded in a subdued light, and he is revolved from east or west to north or south, the vibrating tuning fork will show a rise of pitch.



Fig. 64—Showing a Resonance Tube used in my early work in demonstrating the elicitation of the MM VR

When this normal subject is grounded and facing north or south, if a ruby light is shed upon his bare trunk and then extinguished, the pitch of the vibrating tuning fork will rise very quickly.

This is a most delicate and remarkable demonstration of the effects of the magnetic meridian upon the body and the effect of the ruby light in temporarily dissipating the effects of the magnetic meridian upon a healthy individual. Of course the better the ear of the investigator is trained, the more easily will he detect the variations of pitch as demonstrated thru this resonance tube.



## AN OCULAR REFLEX

On pages 33 and 34 are given the particulars regarding an Ocular Reflex which I discovered some years ago. On these pages mention is made of the **Ophthalmo-Axonometer** and the **Punctumeter** as instruments whereby one could demonstrate this reflex.

Fig. 65 represents the standard **Ophthalmo-Axonometer** devised by H. E. MacLaughlin, M.D., of Waupaca, Wis., and manufactured by the Lueck Mfg. Co. of Milwaukee, Wis. This instrument I purchased purposely for demonstrating this ocular reflex.

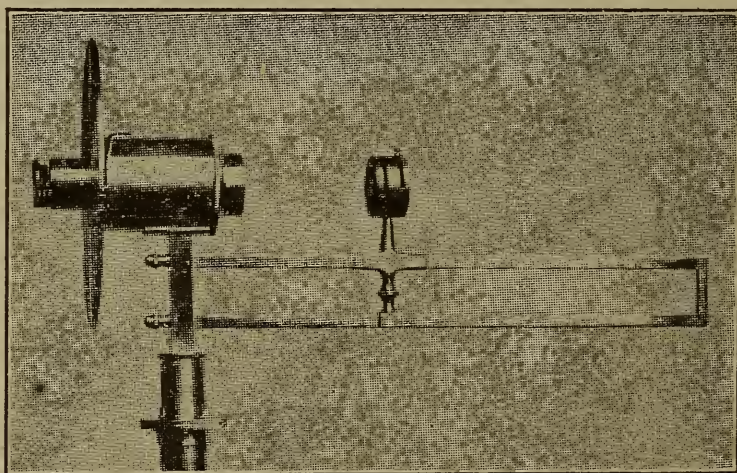


Fig. 65—The Standard Ophthalmo-Axonometer

The **principles** upon which this apparatus works are

1. The scaling down of the distance type and fan chart to a range of a few feet, and still preserving the requirements of the standardized visual angle.
2. The substitution of the focal length of the lens for the actual lens itself.

### Mechanism

In the neutralizing telescope there is placed a  $+8$  lens. The emmetropic eye at the telescope will read the "fogging" type at zero. By sliding the dial carriage on the beam backward and forward, according to the gradations engraved on the beam, plus and minus corrections of the indicated dioptric lens are obtained.



## Recording This Ocular Reflex

I have the same radiation of light on the disc regardless of the position of the instrument. This is accomplished by having a small light attached to the instrument and reflected on the disc.

I ground a healthy subject and have him first face east or west. By sliding the disc-carriage away from the telescope several diopters beyond zero, the "fogging" lens of the disc is in such a position that the eye looking thru the telescope is "fogged" and can observe nothing.

By sliding the disc-carriage slowly toward the telescope, while the observing eye is looking thru it, when the proper location on the beam is reached the observing eye can readily read the letters on the chart. I record the reading on this beam and immediately slide the carriage away so as to again "fog" the eye.

One must not allow the eye to accommodate, but use entirely the "fogging" or "subjective" method.

I then turn the instrument and subject so they are facing exactly north or south, still grounded as before. I immediately move the disc-carriage to such a location on the beam as to make the letters on the chart of the same clearness as they were while the subject was facing east or west. I record this from the scale and, as a rule, find that with a healthy individual, the carriage has been moved from one-half to three diopters nearer the telescope than when the subject was facing east or west. This means that a plus lens would have to be put into the cell-frame in front of the telescope to make the eye, after such a stimulation, read without accommodation, at the same distance as it did while the subject was facing east or west. In other words, the magnetic-meridian energy causes a reflex stimulation which temporarily changes the accommodation mechanism in the eye. The amount of change will usually depend upon the age of the subject. As a rule, the older the subject, the less will be the change. The degree of change is apparently dependent upon the consistency of the lens and the susceptibility of the subject.

In this method all subjectiveness is obliterated as the subject has no way of telling what the location of the carriage is on the beam while he is looking thru the telescope.

### The Cause of This Ocular Reflex

This Ocular Reflex seems to be produced by the stimulation of that part of the ganglionic cord supplying the accommodation mechanism, and latency is uncovered thru this stimulation.

I am aware of the fact that various writers have mentioned that an exophthalmos can be seen to recede following several severe hammer blows on the spine. This phenomenon occurs if the chest is likewise concussed a few times. The fact that the rapidly repeated blows on **any** part of the spinal column or chest produces this phenomenon, shows it is not

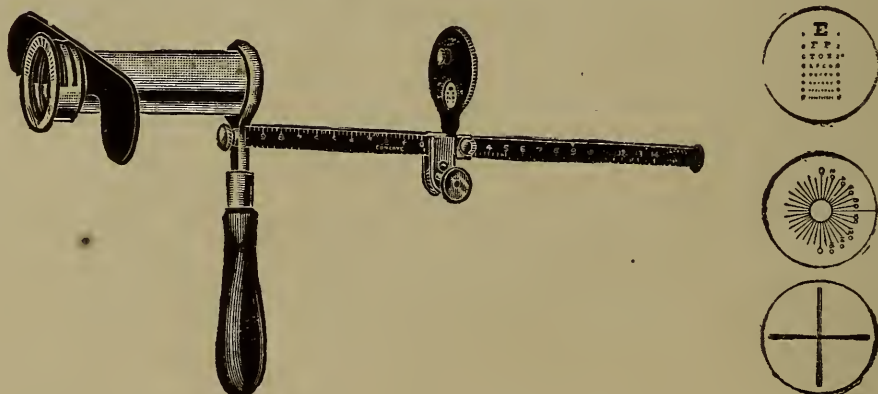


Fig. 66—The Punctometer and Targets

a reflex, but is caused by **shock**. Electrical stimulation will not do it. If the eye is emmetropic, it will protrude slightly following these same concussion blows. Severe pressure over chest and spine will cause this change of position of the eye ball.

The **ocular reflex** that I refer to as occurring when the subject turns from east or west to north or south I first discovered while fitting lenses to a patient's eyes. I observed that a change of position as regards the points of the compass made a difference in the lenses used as a test.

The **Punctometer** is illustrated in Fig. 66. It was designed, I believe, by J. G. Huizinga, M.D., of Grand Rapids, Mich., but the principle of the apparatus I think was first

enunciated by Dr. Tschering in his works on "Physiological Optics" in 1878.

This instrument is manufactured by F. A. Hardy & Co. of Chicago. It is portable and works on a similar principle to the Ophthalmo-Axonometer.

Fig. 66 illustrates the various targets that go with it. The reading target is really the best for illustrating this ocular reflex, but the targets with lines will in many cases demonstrate the elicitation of the MM VR in a very remarkable manner.

The technic for using the Punctometer is the same as described for the Ophthalmo-Axonometer.

### AN AURAL REFLEX

On page 34 is mentioned an Aural Reflex which I discovered, and on page 225 is mentioned a method of treating deafness by sound waves.



Fig. 67—The Galton Whistle

The Galton whistle referred to is shown in Fig. 67. The gradations on this instrument indicate in .1 mm the height of the vibrating column of air. The calculated vibrations range up to 85,000 a second. The technic for eliciting this Aural Reflex is described on pages 34 and 225.

### SPLANCHNIC INSUFFICIENCY (Relaxation of the Splanchnic Vessels)

On page 205 is mentioned Air-Column Percussion as a means of diagnosing splanchnic insufficiency.

Fig. 34 is a drawing of one of my patients, and these lines are exactly as they were found. The general contour of this abdomen shows the condition of ptosis or relaxation of the splanchnic area. This patient's right pulse was much higher than the left, and it will be noticed that the working

and reflex lines on the right side are much higher than they are on the left. These two conditions generally go hand in hand.

All of this patient's peculiar symptoms were relieved by wearing a properly adjusted abdominal support. The fact that these lines will come on the same level immediately after lifting the abdomen up shows at once how to treat this condition.

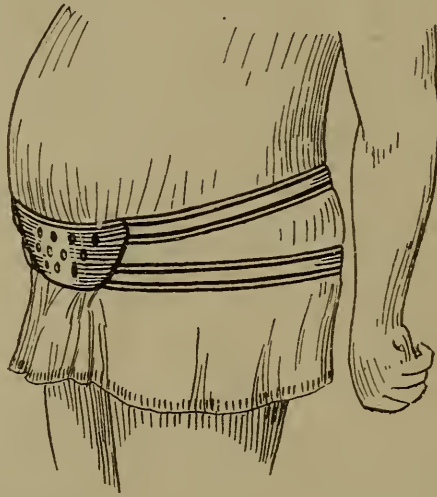


Fig. 68—Showing Valens Improved Abdominal Support in position. Notice the ventilating holes.

## VALENS ABDOMINAL SUPPORT

### Improved Pattern

Pages 208 to 212 illustrate and describe a former style of Valens Abdominal Support. The indications for the use of such a support and full particulars concerning the use of abdominal supports are there cited.

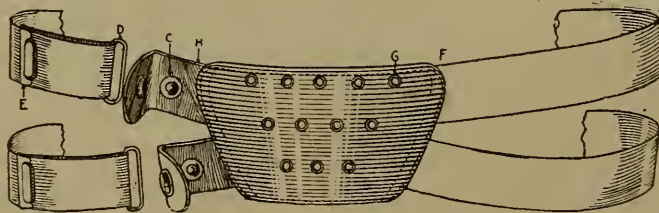


Fig. 69—Showing Valens Improved Abdominal Support ready to put on. *G* shows one of the ventilating eyelets. *F* shows the heavy truss-elastic webbing stitched into the leather pad. *H* shows the leather tab. *C* shows the post-fastener. *D* shows the metal loop for the tab. *E* shows the suspender buckle.



My new style is illustrated in Figs. 68, 69, 70. I made this change in the style of this Abdominal Support to meet the requirements of many physicians who have various ways of fitting these supports, and also to meet the requirements of those living in warm climates.

One of the leading features of this improved style of abdominal support is the ventilation in the pad. Fig. 68 shows this very well, indeed. These ventilations, placed as they are between the ribs as shown in Fig. 70, give the patient great comfort when wearing this support even in the hottest weather.

Fig. 69 illustrates this Abdominal Support. G represents the ventilating holes. H represents the strong leather

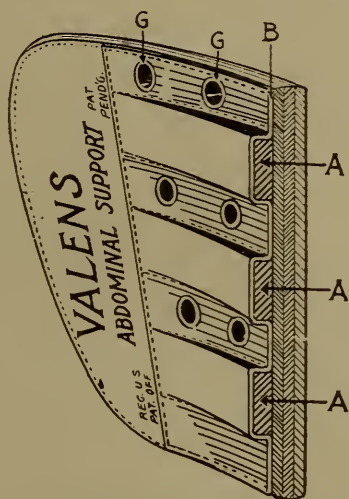


Fig. 70—Showing the ribbing, ventilating holes, and general construction of the pad of Valens Improved Abdominal Support

tab sewed into the pad. C represents the socket or pivot fasteners by which the belt is fastened on by passing this tab thru the loop wire D. When this is passed thru and snapped together it never can come off until it is taken off, and this method of fastening prevents any slipping or loosening of the attachment. E shows a specially made suspender buckle for making the belt longer or shorter. F shows how this heavy elastic web is sewed in the pad.

Fig. 70 shows a cross section of one of these pads. A represents the ribs and B the leather that covers these ribs. This leather lining is cut out keystone shape and is rough, and the ribs stand out so that when the belt is fastened on, it

cannot slide up or down or to the right or left. **G** in Fig 70 shows how the ventilating holes, which are metal eyelets, are placed between the ribs, that is, in the depressions of this pad.

The pad is made of the best strap leather and is sewed together with the very best shoe-maker's linen. The elastic belts are the very best reinforced truss elastic web about two inches wide.

I devised this Abdominal Support for my own use and for that of my patients. By knowing when to use such a sup-

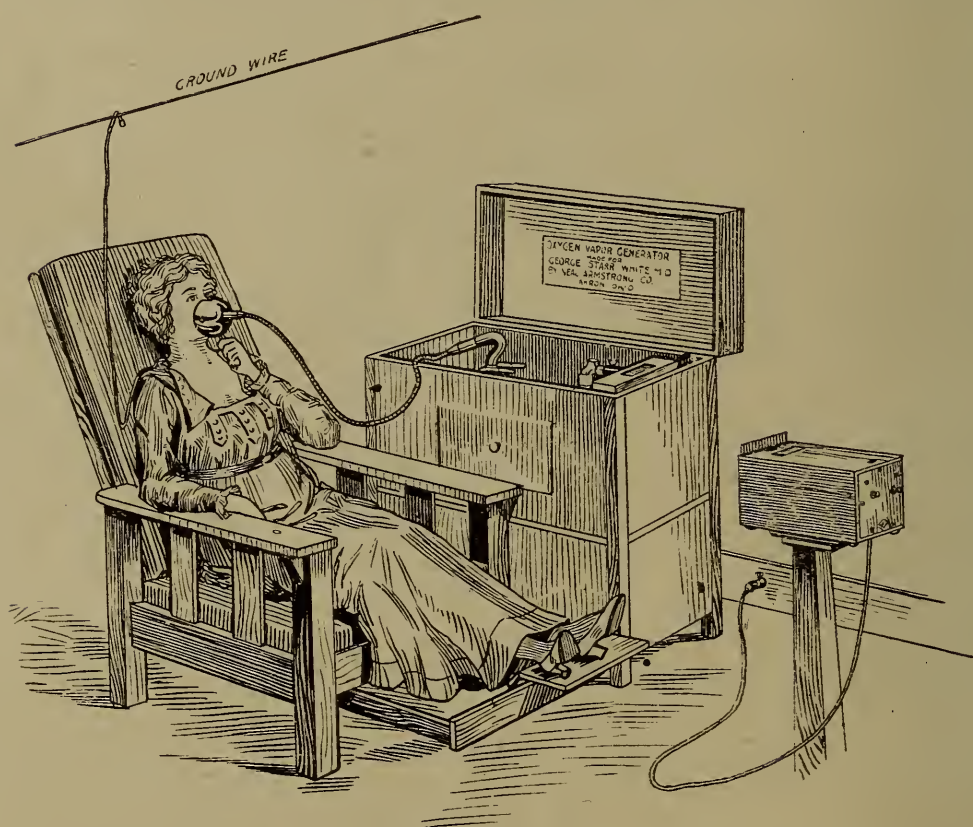


Fig. 71—Showing method of giving Bio-Dynamo-Chromatic Therapy in conjunction with Oxygen-Vapor Therapy

port and knowing how to adjust it, a physician can remedy many obscure conditions that cannot be remedied in any other way.

This Abdominal Support is not to be compared with any that are made of cloth as this Support is in a class by itself and is not made to compete with any other. It is the best that money can procure.

In fitting any abdominal support, the patient should lie on the back while putting it on and draw the abdomen in as much as possible while adjusting it.

## BIO-DYNAMO-CHROMATIC THERAPY

### Intermittent Light Treatment

On page 201 is discussed Bio-Dynamo-Chromatic Therapy in conjunction with Oxygen Vapor Inhalation. Fig. 71 illustrates this very well. It is more fully described below when speaking of Oxygen Vapor Therapy.

The **thermic interrupter** intermits the light in Valens Bio-Dynamo-Chrome for this treatment at about the rate of three seconds on and three seconds off. For ordinary purposes this is about right but for some special conditions I have found that intermitting this light twice during each respiration is better. This can be done by means of the Valens Metronomic Interrupter, which is described later on.

## OXYGEN VAPOR THERAPY

On pages 179 to 201 a good deal is said about Oxygen Vapor, Its Production, and Therapeutic Use. On page 201 is especially mentioned the method of giving Oxygen Vapor along with Bio-Dynamo-Chromatic Therapy.

Fig. 71 shows my method for giving these two modalities together. The patient is seated in an easy chair, grounded and in a subdued light, and facing directly north or south. The Electric Bio-Dynamo-Chrome, with the indicated Chromatic Screen, is placed about five feet away from the patient so the colored light radiates on the bare chest. If the room is warm and the patient does not object, it is best to have the whole front of the abdomen bare for this treatment.

This sketch shows the style of easy chair I use for this purpose. The back is adjustable so the patient can be in a perfectly easy and relaxed position while taking the treatment.

**Single-patient generators** make it possible to treat each patient separately. This method I have found to be superior



to that of having a multiple-patient generator. With a single-patient generator, each patient can be in a room or compartment alone. Compartments can be as small as four feet by nine or ten feet with partitions seven feet high.

### **Oxygen Vapor in Conjunctivitis and Similar Conditions**

Some time ago one of my pupils reported a case of severe conjunctivitis which had resisted all methods of treatment and was relieved and cured in a very short time by means of Oxygen Vapor. His technic was to place the mask over the open eye and let the patient hold it there for several minutes while the generator was in operation. This irritates the eye a little and causes a little lachrymation, but with no bad effects.

Since receiving this report I have told many others and they have tried it out with the same results. I have tried it personally and find it is the treatment par excellence for conjunctivitis.

Other inflamed conditions of the conjunctiva are greatly relieved if not cured by this same treatment. It opens up an entirely new field for the use of Oxygen Vapor and I sincerely hope my pupils will try this out and send me reports, giving symptoms and diagnosis of the case and treatment and results.

### **Oxygen Vapor in Glycosuria**

(Before taking up this discussion, I think it wise to discuss the definition of the term, **hormone**.)

The term "hormone" is still comparatively new and its meaning is not quite clear to all. The name was first used by Prof. E. H. Starling of University College, London, following his discovery of the hormone secretion. He proposed this word from the Greek word meaning "I arouse or excite" as a name for the active principle of the internal secretions. In 1910 Prof. W. H. Howell defined hormones as "those substances in solution which, conveyed from one organ to another thru any of the liquid media of the body, effect a correlation between the activities of the organ of origin and the organ on which they exert their specific effect."



Last year Prof. Starling, before the Royal Society of Medicine, made the following statement: "By the term 'hormone' I understand any substance normally produced in the cells of some part of the body and carried by the blood stream to distant parts, which it affects for the good of the organism as a whole. The hormones are thus the chemical means of correlation of the activities of different parts of the body. Their action may be either the increase or diminution of function, or the alteration of nutrition or rate of growth."

Certain facts pertaining to the condition known as glycosuria and acidosis are quite well established and generally accepted by the profession. Several theories at variance with these accepted facts have been put forth, but anything like general credence has been denied them. I shall therefore base my remarks on the assumption that glycosuria is primarily due to faulty metabolism.

The blood in health contains about 0.2% of dextrose sugar. This sugar is being constantly metabolized in the tissues, and as constantly replenished from the glycogen stored in the liver. The blood cannot hold more than a given amount of sugar. If a healthy person ingests a large quantity of sugar-forming food (especially on an empty stomach), the surplus appears in the urine.

Diabetes mellitus is that morbid condition of the system in which the urine habitually contains dextrose sugar in excess, which excess is not the consequence of any excess in the consumption of sugar-forming foods. The essential fact of the disease is that the tissues are unable to utilize the sugar in the blood placed at their disposal. It therefore accumulates in the blood, whence it is excreted by the kidneys. The tissues then, in spite of an abundance of sugar lying at their door, are sugar-starved.

Minkowski explains this condition as being due to the absence of pancreatic hormone. This hormone is the co-ferment which activates the ferment proper that metabolizes sugar in the tissues. Failure of activation results in the accumulation of sugar in the blood, and its consequent appearance in the urine.

Minkowski's theory is well supported by the evidence shown by autopsy, in which about 75% of cases of diabetes exhibit a diseased pancreas. In these cases the changes consist of an increase of the connective tissue stroma, accompanied by atrophy of the parenchyma. The occurrence of diabetic coma is probably due to the presence in the blood of the fatty acid, B. hydroxybutyric acid.

This acid is a normal product of fat metabolism; it is not, however, found in healthy urine. It is probably oxidized into aceto-acetic acid, which, by losing  $\text{CO}_2$ , becomes acetone. Of these various bodies, acetone alone is found in healthy urine. Only when we observe acetone in excess, do we speak of acetonuria. In diabetic coma, the oxidation of B. hydroxybutyric acid seems to fail and it accumulates in the system, bringing about acidosis.

By "acidosis" is meant the condition in which there is a marked reduction in the alkaline reactivity of the blood, owing to the presence therein of abnormal quantities of B. hydroxybutyric and aceto-acetic acids (which fail to be oxidized into acetone).

There are two explanations of the resulting symptoms:

(a) Under ordinary circumstances the alkalis of the blood carry  $\text{CO}_2$  from the tissues to the air in the lungs. Should, however, the aforesaid acids be present, they, by combining with the alkalis, prevent the removal of  $\text{CO}_2$ . Accordingly the  $\text{CO}_2$  stagnates in the tissues, setting up tissue asphyxia.

(b) The respiratory center in the medulla, owing to the reduced alkaline reactivity of its neurosome, becomes hypersensitive to the action of  $\text{CO}_2$ , which is their normal stimulus.

This somewhat sketchy review of the condition leading up to diabetes mellitus, together with the blood conditions observed during the varying stages of the disease, lead us to the conclusion that **faulty metabolism** is the cause, and in the alteration and correction of metabolism lies the cure.

Primarily we must stimulate the secretion of hormone by the pancreas. This can be accomplished by a general cell stimulation thru oxygenation of the blood by means of oxygen vapor inhalations. The next result of this blood oxygen-

ation is the oxidation of B. hydroxybutyric and aceto-acetic acids to acetone, with a relative increase in the alkaline reactivity of the blood.

**Oxygen Vapor inhalations do increase the oxygen capacity of the blood**, as was demonstrated by Labbe in Paris. He submitted several anemic patients to daily blood examinations, both before and after inhaling oxygen vapor. He used a Henocque hematospectroscope capable of showing fractional percentages of oxyhemoglobin.

An inhalation of thirty minutes gave an increase in oxyhemoglobin of 1%. During the ensuing twenty-four hours, all but one-tenth of 1% was lost thru tissue absorption. Another thirty minute inhalation of the vapor would again augment the oxyhemoglobin 1%, with another subsequent loss of all but one-tenth of 1%, plus the one-tenth of 1% gained the previous day. In this way he was able to gradually bring the blood to a condition of healthy normality, the time required being governed by the pathological conditions leading up to the anemia.

Theoretically, as well as practically, **oxygen vapor** seems to offer more chance for success in the treatment of diabetes, than any other modality. We have in it a potent vehicle for the carrying of oxygen in an assimilable form to the blood, thru which we eliminate acidosis and promote sugar absorption by the tissues and hormone secretion by the pancreas, as secondaries to metabolic alteration and correction thru cell stimulation.

#### **Note**

While speaking of hormones and glycosuria, I want to mention a phenomenon which I discovered and have often proved—that is, regarding the stimulation of the 2d and 3d cervical vertebrae.

I place one electrode over the 2d and 3d cervical vertebrae and the other over the eyes as shown in Fig. 90, and use a specially interrupted, rapid-sine wave current (**Pulsoidal Current**). This treatment, if given ten to fifteen minutes daily, will reduce blood pressure and also cause the sugar in the urine of one suffering with diabetes mellitus to almost entirely disappear. I believe the cause is that the treatment as outlined acts on the hormone secretion thru the pituitary body.



## RADIANT LIGHT AND ITS THERAPEUTICS

The following should go after page 176:

### Therapeutic Lamp

Fig. 72 shows the style of therapeutic lamp shade that I use. This is the same style as the old "leucodescent" lamp shade, which I think has not been improved upon.

The hood measures sixteen inches in diameter at the bottom of the apron. The apron is seven inches deep. The conical portion measures twelve inches on the slant.

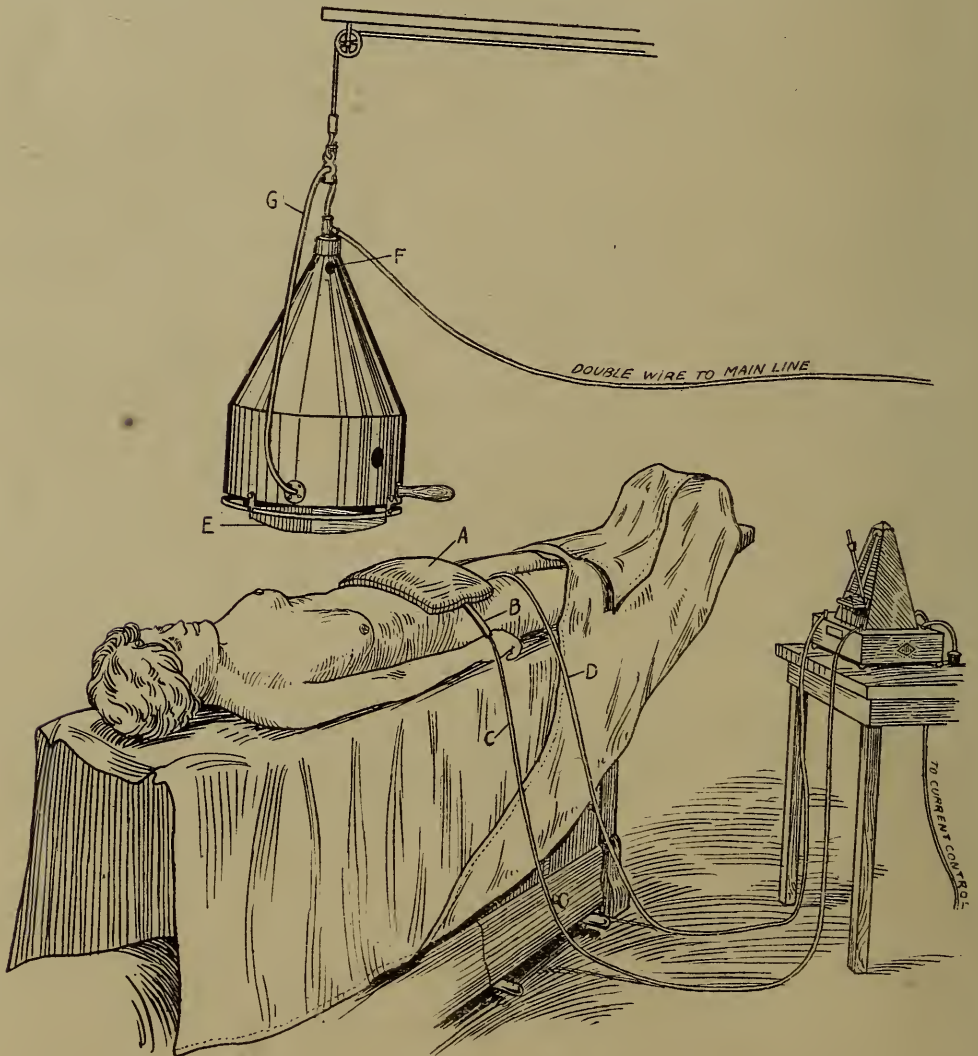


Fig. 72—Showing manner of using Powerful Radiant Light, sand pad, and Pulsoidal Current in vagina or rectum. This same modality is correct for some pathological conditions of stomach and gall bladder.

The lamp bulb is about 34 inches above the skin of the patient.



**F** represents one of the eight three-quarter-inch-ventilation holes that I designed for this shade many years ago.

Near the wooden handle is an observation hole such as I used to employ when using a carbon lamp but it is not as necessary when following out my new technic of employing a very high candle power, gas-filled lamp.

**G** represents the adjusting rod first used, I think, on the leucodescent reflector for setting the shade at any angle desired. This method is far superior to the method used in cheaper shades where the tilting is done by means of the suspensory cable.

**E** represents the aluminum wing pieces that I have designed to attach to the bottom of the shade by means of a suitable arrangement. The object of these wing pieces is to create a breeze over the body when the lamp is used for treating the whole body at a time and moving it back and forth, as was the technic when using the carbon filament lamp.

It will be noticed in this engraving that the double feed wire is not used over the pulley which suspends the lamp. This construction is far safer than passing the feed wire over the pulley and using it as a suspensory cable, and it is recognized as standard by the National Board of Underwriters altho the method used on most of the cheaper models is not considered safe by them.

The inside of this shade has fitted over the globe a corrugated aluminum reflector. The inside of the shade is silver-plated. Altho this style of lamp shade is far more expensive than many on the market, yet I think it is well worth the difference in price, and other therapeutic-lamp shade manufactures could make as good a shade, if there were a demand for it.

I am now using 1500-watt, gas-filled lamps, made by The General Electric Co. under the trade name of "Sunbeam" in preference to any other. From such a reflecting shade as above described, these lamps radiate approximately 3,000-candle power.

The technic that I have found the best for using such a lamp is one that I have mentioned before, but which I can now emphasize after having heard from so many of my pupils who are using it in this manner.

## Technic

I place this lamp so that it will focus over the area I wish particularly to treat, such as the stomach, abdomen, face, breast, etc. (The patient must have no clothes intervene between the light and their skin.) By having an adjustable cord attached to the suspensory cable, I am able to fasten this lamp at just the height I wish to have it above the patient's body. As a rule, I place the globe so it will be twenty-eight to thirty-two inches from the surface I wish to treat.

I leave it in this position for from ten to sixty minutes, depending upon the condition and the effects I wish to obtain.

This prolonged, direct method of using this powerful lamp is giving me and also my pupils results that we had never anticipated and that never could have been obtained by any other agency or by any other technic

In some instances where I wish to derive very marked and rapid effects from the heat and light of this lamp, I place the shade a little nearer the body and keep the surface of the body cool by blowing compressed air over it, using the air-spreading nozzle shown in Fig. 73. This air-spreading

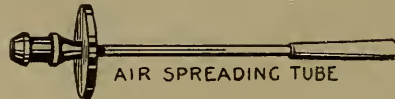


Fig. 73—Showing my Air-Spreading Tube for blowing compressed air over the body

nozzle was made for me by the DeVilbiss Mfg. Co. of Toledo, Ohio. It fits any ordinary air cut-off valve.

Twisting of the lamp shade, with the wing pieces on, will also create a breeze over the body and enable one to use more profound heat than can be used without circulating air rapidly over the body. I have found that an ordinary electric fan is not suitable for this work, because it does not localize the breeze enuf, and many times produces a contraction of the skin over some other area, causing an acute congestion and consequent pain and stiffness.

## Radiant Light and Heat per Vaginam

On page 280dd, Case IV, is mentioned the use of radiant light and heat per vaginam. Several pupils have asked me

how this is done. Fig. 74 illustrates my Radiant Light and Heat Localizer. It also shows the standard wooden vaginal speculum that can be bought at any surgical outfit store. These wooden specula come in sets of three. Hard rubber can be used in place of wood, if desired. Metal for this purpose will not do as well as wood or rubber. The Radiant Light and Heat Localizer is made of tin or other metal, covered with asbestos. The dispersing end of this funnel-shaped localizer is made of soft rubber and fits inside the speculum.

This outfit was made for me by Knauth Bros., New York City.

### Technic

I first swab the vagina out well, then lubricate a one-piece tubular speculum as illustrated, and place it into the vagina with the elongated part of the speculum directed into



Fig. 74—Showing a simple Radiant Light and Heat Localizer for vaginal and ear treatments. Made by Knauth Bros., New York.

the cul-de-sac, allowing the cervix to be in a plain view thru the speculum. The patient is put in as comfortable a position as possible with the thighs flexed. I place this funnel-shaped director so the dispersing end is well up in the speculum. I then take a hand therapeutic lamp with a shade that just-fits inside the receiving end of the funnel, and turn on the light. I use the largest size tungsten lamp that will fit inside this shade. I let the heat and light radiate from this



lamp until the patient describes the heat as uncomfortable, when I withdraw the lamp. After a little practice, one can judge about the length of the séance. As a rule the patient will not feel the heat as uncomfortable for five minutes altho the light is radiating on the cervix all the time.

If I use a wooden speculum, I have one for each patient. If I use hard rubber, that can be sterilized and used on more than one. Metal is not good as the heat is communicated too much to the adjoining parts. A patient can stand a great amount of light and heat over the cervix uteri and not feel uncomfortable.

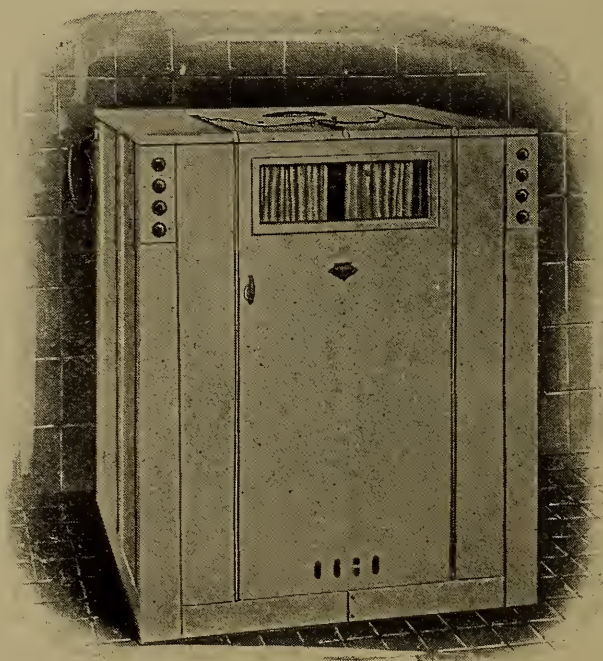


Fig. 75—Showing the latest achievement in Electric Light Bath Cabinets. This is made by Burdick Cabinet Co., Milton, Wis.

### **Radiant Light and Heat per Auram**

Fig. 74 shows also an attachment for using this same Radiant Light and Heat Localizer in the ear. An ordinary ear speculum of the style illustrated will fit in the soft rubber, dispersing end of the localizer. I find this a very efficient method of putting radiant light directly on the ear drum, altho it requires an assistant to help do it as the pinna has to be drawn upward and backward when placing the speculum in situ.



## Electric Light Bath Cabinet

Figs. 75 and 76 show the exterior and interior of the latest achievement in bath cabinets. This bath cabinet was designed by the Burdick Cabinet Co. of Milton, Wis. to meet my requirements. One look at it will answer the question as to whether the design is ideal and one trial will convince anyone that nothing better has ever been gotten out in the way of an electric-light bath cabinet. From my standpoint I think it is the best that has ever been devised for this purpose.



Fig. 76—Showing interior of same cabinet as shown in Fig. 75

I have been making a series of experiments with bath cabinets and find that a bath cabinet ventilated and having tungsten lamps arranged as they are in this cabinet, will cause a patient to perspire at as low a temperature as  $76^{\circ}\text{F}$ . At blood heat a most profound perspiration can be brought about and in a very few minutes.

My **technic** for handling such a bath cabinet is as follows:

I turn on the two middle rows of lamps in the back of the cabinet first so as to have the cabinet at about  $72^{\circ}\text{F}$ . I then have the patient enter and arrange a sheet in front of

the face so the heat and light from the bath cabinet do not go up to the face. I have all the ventilators wide open. Within two minutes I turn on two more rows of lights and so on until gradually all the lights in the cabinet are lighted. My object in doing this is to not shock the system. I have found by actual experimentation that I can produce perspiration in this manner in one-quarter the time I can with the old method.

The great advantage of this method is that the patient's pores are opened in the shortest possible time. Perspiration begins and with it the general elimination thru the skin, and best of all the patient has no tired, languid feeling after the bath.

After the bath I dry the body and immediately spray it with alcohol in which has been put a few drops of some essential oil.

I then give whatever other treatment may appear indicated, such as powerful-incandescent-light therapy, oxygen-vapor therapy, etc.

### **Reflex of the Skin**

Did you ever notice what happens when you step into a room a good deal colder than your body temperature?

Did you ever notice what takes place when you step into a room with a temperature much higher than the body temperature?

If you have not, do so the next time you have an opportunity, especially when naked.

The first thing that happens is a reflex contraction of the pores of the skin. This is nature's method of warding off a sudden shock. It requires about ten minutes for such skin to become relaxed. By having the temperature changed gradually, no such powerful reflex takes place. That is the secret of giving electric light baths with the temperature raised gradually.

## PSYCHOLOGY OF ODORS

I have mentioned the fact that I put a few drops of essential oils in the alcohol with which I spray off the body after an electric light bath. The spraying apparatus I use is the eight-ounce bottle spraying device made for me by the DeVilbiss Mfg. Co. of Toledo, Ohio. It is really their No. 58 atomer fitted to an eight-ounce bottle. The compressed air apparatus I use is that manufactured by Sorenson & Co., New York City.

I first ascertain what odor the patient particularly likes. Many times the color of the clothing a lady wears and her general style will indicate the odor she likes best. Elderly people, as a rule, like odors of old-fashioned garden flowers or herbs. When I have decided what odor will be most pleasant to the patient, I put a few drops of the oil giving that odor in about four ounces of alcohol and spray the body with it.

There is something about the psychology of an odor that is farther reaching than one at first realizes. Did it ever occur to you that any incident that happened in your childhood that carried with it certain odors will always be brought to mind when you smelled that particular odor again? The psychology of odor is really more definite than that of sight or sound, and in fact more than any of the other senses. You may forget what you have seen, heard, felt, or tasted; but you **never** forget a distinctive odor, especially if that odor is connected with some incident in your life.

In giving any form of treatment, it is well for the physician to study the patient from all angles, and the better those patients are pleased with the treatment, so much better is the treatment for them and so much better is it for the physician.

As an example of this, I will cite a few cases.

A lady about 70 years of age, came into my offices for treatment. I decided to give her an electric-light bath, and scented the spray with oil of fennel. As soon as she detected the odor she made this remark, "Doctor, how did you know the odor that I most like? That takes me right back to my old home."

In a few days another lady came in, saying that she

wanted a treatment similar to the one I gave the lady above mentioned, as she had been so enthusiastic about it. I used a spray of oil of anise for this lady and she was delighted with the treatment.

For another lady about thirty years of age, who bore the air of a traveler, I used oil of cassia and one drop oil of sandal wood. She remarked that it reminded her of oriental places, and she was delighted that I knew what odor she liked best.

If you are not sure what odor to use, ask your patient what odor they like best. You will notice that the spray is not strong or lasting but it is pleasant while it is used.

Many have asked what oils I carried and for their benefit I will mention what I keep in stock. From these oils almost any odor can be made by making combinations, and it takes only a little practice to know how to do it.

Oil Anise	Oil Geranium
Oil Balsam of Peru	Oil Juniper berries
Oil Bay Leaf	Oil Lavender
Oil Bergamot	Oil Lemon
Oil Cajeput	Oil Orange
Oil Camfor	Oil Patchouly
Oil Caraway	Oil Pennyroyal
Oil Cassia	Oil Peppermint
Oil Cedar wood	Oil Pimento
Oil Citronella	Oil Pine Needles.
Oil Clove buds	Oil Sandal wood
Oil Coriander	Oil Sassafras
Oil Cubebs	Oil Spearmint
Oil Eucalyptus	Oil Thuja
Oil Fennel seed	



## EFFECT OF COLOR ON FLIES

The following experiments with flies have been conducted for us and are very illuminating:

Several samples of decayed matter, containing house-fly larvae, were placed in screened boxes, the inside of which were painted respectively red, yellow, and blue. The screens were covered by a curtain of coarse cheesecloth dyed to correspond with the color of the box interior. Care was taken to prevent the entrance of any light other than the respective colored light.

At about normal periods, flies hatched in the three boxes. These first generation flies were transferred to boxes of the same color and screening, containing sterile decayed matter, and allowed to breed. In this way second generation flies were obtained of three classes corresponding to the boxes in which they were reared.

Three groups of twelve each of red-bred flies were placed in three colored boxes of red, yellow and blue, containing sterile decayed matter and carefully screened from white light.

The same was done with the flies bred in the yellow and blue boxes. All flies were taken indiscriminately from their respective boxes, no care being exercised as to the selection of sex.

The following are the results:

Red-bred flies showed a 90% higher fecundity in red boxes than in yellow, and 89% higher than in blue.

Yellow-bred flies showed 100% higher fecundity in the yellow boxes than in red, and 91% higher than in blue. Not one hatched in the red box.

Blue-bred flies showed 100% higher fecundity in a blue box than in a red, and 90% higher than in yellow. Not one hatched in the red box.

From this, we make the following conclusions:

Flies born and bred in colored light and living in colored light, will hatch naturally at the normal rate of fecundity only in the light to which they are attuned. A change of light prohibits fecundity altogether or reduces it to a very low degree.

Two farms about a mile apart, with no nearer habitation, had barns and kitchens as follows:

Farm A had barn painted the usual iron-ore red both inside and out. The kitchen was painted a fairly bright blue and the dining room red. There were at least 75% more flies at all times in the red dining-room than in the blue kitchen, even when food was exposed in both rooms.

Farm B had barn painted the usual red outside but yellow inside. The kitchen was red and the dining-room yellow. The kitchen contained only a few flies whereas the dining-room swarmed with them.

From these observations, it would appear that the flies born under the influence of a certain color find that color more congenial than any other.

It may be by this provision of nature insects are able to find their proper food thru color detection. They are usually hatched amid color surroundings due to reflected light from plants and leaves or flowers that are to be their food supply during life.

(Pages 177 and 188 give other data regarding the effects of colors on flies and mosquitoes.)

## THE IRWIN TRINITY-COLOR SYSTEM

The following are sub-divisions of the **Trinity Color System** as formulated by Miss Beatrice Irwin, London; Eng. Her system is fully discussed in her book entitled, "The New Science of Color." Miss Irwin has found that the colors that are here named act upon the systems given. She has found that decorations and surroundings of all kinds, of the colors named, have a very decided action upon the physical, mental, and spiritual being of the individual.

1 THE PHYSICAL	2 THE MENTAL	3 THE SPIRITUAL
<i>Sedative</i>	<i>Sedative</i>	<i>Sedative</i>
Lead Gray	Olive Green	Moonlight Blue
Prune	<i>Recuperative</i>	<i>Recuperative</i>
Terra Cotta	Rose Madder	Orange
Moss Green	Fawn	Flame Rose
<i>Recuperative</i>	Royal Blue	<i>Stimulant</i>
Golden Brown	Emerald Green	Eau de Nil
Turquoise	<i>Stimulant</i>	Mauve
<i>Stimulant</i>	Violet	Citron
Vermilion	Chrome	Azure Blue

From my experience in color study, I unhesitatingly say that this **Trinity Color System** of Miss Irwin's is in accord with my findings. I have studied the character and temperaments of persons living in surroundings of certain colors to learn the effect of color on humanity as well as on insects and animals, and my findings coincide with those of Miss Irwin.

Color has a far deeper effect on all living beings than is commonly known, and it is Miss Irwin's aim to place color study where it rightly belongs—in the institutions of learning and consequently in the home.

Color, if rightly taught, will effect and mould the emotions as music does, and will aid in lifting humanity on a higher plane.

## TUBERCULOSIS

On page 71, Clinical Case I, is described a most rare, and what seemed fatal, case of tuberculosis which showed itself as a great abscess. Fig. 77 shows this patient **cured**.

The fact that no one had been able to diagnose the cause of this terrible abscess makes the case of peculiar interest because my Bio-Dynamo-Chromatic findings were those of

tuberculosis (A-MM VR). This diagnosis was verified by animal inoculation in a public laboratory.

The indentures in the flesh, front and back, show the openings from which pus flowed in great quantities. The outline on front and back show the areas that were engorged with pus. This abscess was so large that the bust line and waist line were nearly obliterated.

Ten months of daily treatments with Radiant Light, Oxygen Vapor, and Intermittent Ruby (A<sup>4</sup>-Chromatic Screen) **cured** this lady. Within a year from the day she was brought to me in what seemed a hopeless condition, she was examined for an insurance policy and passed as **well**. Time has proved that she **is well**.

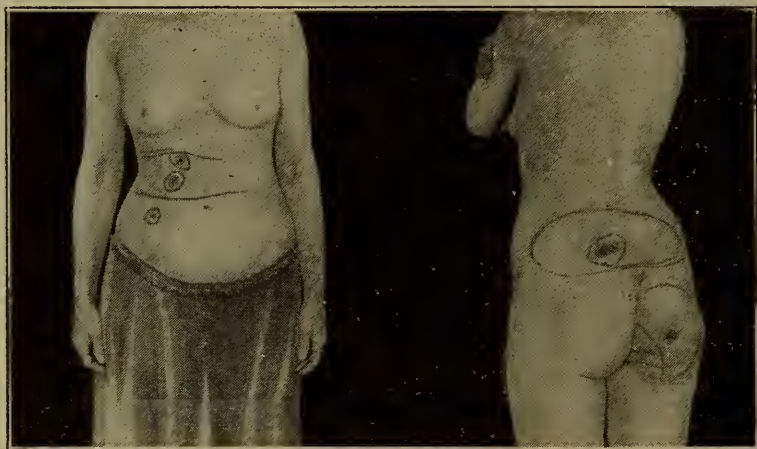


Fig. 77—Showing a patient cured of a great tuberculous abdominal abscess. The “pitted” places are scars of openings, from which pus flowed for months. One such scar on inside of right thigh does not show. The marked areas, front and back, show where the great swellings were located.

This is a typical case and shows not only the exactness of Bio-Dynamo-Chromatic Diagnosis but the great value of Bio-Dynamo-Chromatic Therapy, along with Oxygen-Vapor and Radiant Light Therapy.

#### Case XI. Incipient Tuberculosis—Use of Iodex

Miss D. 26 years of age. Under treatment for incipient tuberculosis. Altho I used radiations from the 2,000-candle-power lamp, along with oxygen vapor and other physical measures such as I use for treating this condition, her appetite did not improve. She had to force the food down.



Taking a cue from some of my other research work, I began rubbing iodex over her chest, breasts and abdomen. I then allowed the radiations from the 2,000-candle-power lamp to fall on this surface for about twenty minutes. I gave her no suggestion as to why I did this. The third day after the first application, she remarked that she was so hungry that it seemed as if she could not get enuf to eat, and she had not eaten as much before in five years. I continued using iodex in this manner for two weeks and she had a ravenous appetite. Her stomach was in fine condition and she was wonderfully improved.

I have noticed almost uniformly an increase of appetite after using iodex in this manner. (See Iodin Therapy.)

## INFANTILE PARALYSIS—ACUTE ANTERIOR POLIOMYELITIS

During the past year I have been watching reports regarding this great scourge.

I have watched also the way this terrible disease has been treated.

From the gathering together of all the facts, acute Poliomyelitis, known as "Infantile Paralysis," comes on like an acute tuberculous infection. I am beginning to think the tubercule bacilli, in some form, are responsible for this malady.

Compare the two conditions carefully and notice how, from laboratory tests to clinical findings, the two infections are similar.

### Treatment

Radiant Light from a 2,000 to a 3,000-candle-power gas filled lamp is radiated and from reports I have received, it seems to be the treatment par excellence, especially when used with oxygen-vapor inhalations.

As the spinal column is usually the seat of the trouble, the radiant light should be directed over the spine and **treatment begun along these lines as soon as the first symptoms appear. Don't wait for several days or weeks.**

Radiant Light is of great benefit during the whole course

of treatment for Infantile Paralysis. The fact that it can be used without touching the hypersensitive skin that accompanies this affliction, makes it of great value. As patients cannot be taken to the office during the acute stage, a lamp should be installed in the home or hospital wherever the patient may be for giving this Radiant Light Treatment.

**Electric Treatment** for stimulating impaired muscles should not be attempted until the acute symptoms have subsided for at least four to six months. There is great danger in using electrical stimulation, such as galvanism or any other current, over the impaired muscles to a victim of Acute Anterior Poliomyelitis, early in the disease.

In giving electrical treatment, I find the **Pulsoidal Current** to be one of the very best modalities, using Mode A. Another current that has been of great efficacy is the intermittent galvanic current. The technic for using that is to pass a direct current thru a Valens Metronomic Interrupter, arranging the switches as for Mode A. For using the galvanic current (constant current), place the positive pole, or indifferent pole, over some indifferent point, but use the **negative pole over the motor point of the muscles that you wish to cultivate.**

**Do not use electricity for too long periods at a time. Much harm has been done muscles by using too strong a current and by having the treatment too prolonged.**

Use a current that is just strong enuf to make a contraction on the muscles, and never use it over five minutes at a séance. Give these treatments about two times a week. It may take six months to two years to bring about the results aimed for, but it will pay to use great caution and care in this work. The results when following out this technic will be very satisfactory to the physician and the patient .

In the nose use oil of eucalyptus and olive oil, half and half, and use same over the body when practical. Oil of eucalyptus acts as a disinfectant and prevents contagion.

I have not had an opportunity to try out the MM VR of cases with "Infantile Paralysis," but shall if I can find an adult with the well marked symptoms.

Ruby intermittent light along with oxygen-vapor inhalations, I think will be found to be very helpful.

## CANCER

On pages 84 to 92 is discussed Cancer, Its Diagnosis and Treatment. As before stated, I have a special Chromatic Screen for diagnosing cancer which will definitely differentiate it from tuberculosis. Cancer then gives a B-MM VR.

To gauge the severity of the cancer toxemia, we can use the Chromatic Screens A<sup>4</sup> to A<sup>1</sup> because the A-Chromatic Screen will diagnose both cancer and tuberculosis.

### Formaldehyde Therapy for Cancer

Dr. Charles E. Walton of Cincinnati, Ohio, read a very interesting paper at the Surgical Gynecological Society of the A.I.H. at Baltimore in 1916. This paper is recorded in the October, 1916, number of the Journal of the A.I.H. Dr. Walton mentions the use of a 40% solution of formaldehyde for inoperable cancer of the uterus as well as cancers about the face and elsewhere.

Dr. Walton's discussion is very interesting. He cites two cases of inoperable cancer of the uterus and says that under a general anesthetic they were curetted and a gauze saturated with 40% solution of formalin was packed in the uterine cavity and left for forty-eight hours. After that time the gauze was removed and the upper part of the vagina and cervix were mummified. In about three weeks a great slough came away without bleeding. In the meantime the patient was without pain or discomfort. Patient doing well.

For cancer of the cervix I know an application of formalin on a gauze, putting it inside a rubber womb cap and leaving it there for forty-eight hours, will in many cases cure the cancer.

In using 40% formalin on the skin for any purpose, the operator must use a good deal of judgment and put it on very lightly because this is a most powerful escharotic and cuts off the blood supply and mummifies the tissue. Years ago I carried out a long series of experiments with formalin solution and found that it would mummify live or dead flesh in an energetic manner. One singular thing I noticed when using formalin on living tissue was that it did not cause pain, if it were just touched to the skin.

In my Lecture Course on page 91 I cite a case of cancer of the cervix which I cured by means of a local application of terpene peroxid and general treatment following out my regular method.

In treating cancer with such an agent as formalin, I would never fail to treat the patient constitutionally, that is, give the radiant light, oxygen vapor, and intermittent cancer color.

## **SYPHILIS**

### **Bio-Dynamic Findings and Treatment**

On pages 93 and 94 is mentioned the fact that syphilis, auto-intoxication and malaria gave the same Bio-Dynamo-Chromatic finding. Since writing that, I have discovered a combination of colors that will diagnose malaria but not syphilis.

The Valens Chromatic Screen for syphilis is **C**. That for malaria only is **F**. Therefore syphilis gives a **C-MM VR** and malaria an **F-MM VR**.

The **F** screen may diagnose auto-intoxication alone, but I have not yet found cases enuf with just auto-intoxication to prove it. I have not found a case of syphilis that was not suffering from auto-intoxication also. Some of the most recent reports on this subject from laboratories of good reputation, definitely say that auto-intoxication is always concomitant with syphilis. There are some new blood tests to prove this, even if it cannot be proved from the urine.

### **Iodin Therapy in Syphilis**

On pages 93 and 94 is mentioned the use of potassium iodid in syphilis. After a long series of experiments, I find that **Iodin Tincture**, following the technic mentioned on page 513 is preferable to KI.

### **Oxygen Vapor in Syphilis**

Oxygen-Vapor therapy, along with the powerful radiant light and new electric-light bath therapy, all are gaining great favor in the treatment of syphilis.

Never forget **Sulfur Medication** as mentioned on page 237, when treating syphilis.



## SPECIFIC URETHRITIS—GONORRHEA

On pages 102 to 107 is discussed Specific Urethritis and Specific Vaginitis. Several methods of therapy are described.

The reports from my pupils from all parts of the country indicate that the powerful radiant light and oxygen-vapor therapy, along with intermittent violet light (D-Chromatic Screen) is the best treatment. If the infection has reached the prostate, I use the **pulsoidal current** or slow-sinusoidal current in conjunction with the above.

On page 102 it is mentioned that specific urethritis gives a "violet" MM VR. The term, "violet," like every other color, is very misleading as there are innumerable shades of violet; and many call purple and prune color a violet.

The D-Chromatic Screen diagnoses specific urethritis. D<sup>2</sup>-Chromatic Screen will elicit the MM VR if the condition is not acute or does not produce a very severe toxemia. An acute case will give the D-MM VR but after two or three weeks' treatment as outlined above, the same case should give a D<sup>2</sup>-MM VR.

### Specific Urethritis Concomitant with Other Toxemias

We often have cases to diagnose where specific urethritis is concomitant with tuberculosis or syphilis. It requires a little more judgment to diagnose such a case than if it is specific urethritis alone, as the D-MM VR will not be as pronounced if there is also an A, B, or C-MM VR.

The D-MM VR will be noticeable just the same, perhaps showing the reflex line only one finger's breadth below the working line; and the same will be true of the A, B, or C-MM VR—the reflex line being only about a finger's breadth below the working line.

Ordinarily specific urethritis gives a very pronounced D-MM VR, provided it is not concomitant with some other toxemia.

## MASTITIS

In my Lecture Course I mention several cases of supposed cancer of the breast that were cured by powerful radiant light therapy. I did not mention in particular regard-

ing **mastitis**. This condition is often found in nursing women, especially when they are weaning the infant. Every physician has been taught that hot boric acid compresses is the treatment par excellence for this condition.

Some time ago I reported to some of my pupils some cases of mastitis that I had treated very successfully by means of the powerful radiant light. Since then several have used this modality instead of hot compresses and the results are more than flattering. They universally report that the hardened gland yields more quickly to radiant light therapy than to any other method they ever tried.

The technic for this work is to allow the radiations from a 2,000 or 3,000-candle-power incandescent lamp to shine directly over the affected breast for at least half an hour at a séance. The lamp should be from twenty-eight to thirty-two inches from the gland while giving the treatment. After the first treatment with the light, gentle massage is beneficial, massaging toward the **base** of the gland. I find it is well to have the hands lubricated while giving this massage treatment. For the lubrication I use terpene peroxid and olive oil, about half and half. Do not begin massaging until the light has been shining on the gland for fifteen or twenty minutes. Then use a little of this oil mixture on the hands as a lubricant and massage gently. Iodex can be used in place of the terpene peroxid and olive oil mixture. If the baby is not yet weaned, use olive oil as a lubricant.

The most stubborn case of mastitis will generally yield to this treatment within forty-eight hours. Many will be relieved and even cured with one treatment. If it is a very bad case, the light should be left on for at least an hour.

The eyes of the patient should always be protected while using this powerful radiant light therapy. If the radiation of the light and heat is liable to cause the patient to have a headache, a wet towel may be placed on the head.

In any case of mastitis, make it a rule to clear the bowels out well as soon as the case presents itself. For this purpose I would recommend salithia manufactured by the Abbott Laboratories, Chicago.

## Hyperemic Treatment

On page 236 is mentioned a device for producing negative pressure by means of a water-faucet attachment, which is a modified aspirator. This device can be used not only for bust development but for **pumping the breasts**.

This device and attachments are illustrated in Figs. 104 and 105. Figs. 106 and 107 show different ways of using same.

The **technic** for pumping the breasts with this apparatus is to have the patient lie on a table under a big lamp if possible, as shown in Fig. 106. The large twin-bust jars, illustrated in Fig. 105 are placed over the two breasts and the suction device attached to a water faucet, as shown in Fig. 104. When the water is turned on negative pressure will be produced in the bell jars and the milk will be pumped out of the breasts in a most remarkable manner. This is a wonderful method for pumping the breasts when they cannot be pumped by any ordinary method, and the two breasts can be pumped dry in about five minutes. Lumps in the breast caused by an engorgement of the lacteal ducts, often seen in nursing mothers, can be relieved by means of the big light and this hyperemic treatment in a manner that will astonish the novice.

I have had cases referred to me where the milk ducts about the nipple seemed to be entirely closed and no ordinary breast pump would have any effect upon them. The patient would be in great pain. I would put them under the big lamp for about half an hour and then put on the bell jars. The milk would begin to flow in both breasts simultaneously within a few seconds and the comfort experienced by the patient could not be expressed in words. A dampened cheese-cloth can be used for taking up the milk when the jars are removed.

This hyperemic treatment along with radiations from the big light will **increase the milk supply**.

I believe this method of treatment is original with me, but my success has been so marked that I want to call attention to it. There are certain conditions of the breasts in which the breast pump seems to shut off the flow, but with

a large bell jar like the ones illustrated in Fig. 105, suction is made over the whole breast and not about the nipple only.

These bell jars come in all sizes so they can be had to fit any size breast. They can be procured thru the Physicians and Dentists Corporation, Canton, Ohio.

I want especially to call attention to the style of bell jar here shown as there are several kinds made. The kind with a glass stem is very fragile and I would not advise anyone to get them. The kind shown in this figure has a metal nipple to which is attached the rubber tubing. This metal nipple is cemented to the glass jar. Such bell jars as these are very durable, but they cost more than the other kind.

The **T** metal tube that is shown in Fig. 105 can be procured from any physicians' outfitting house or can be made by any good mechanic. By means of such a **T**-tube cut into the suction tube, two patients can be treated at the same time.

This illustration also shows a single bell jar which can be used alone.

It will be noticed that there is a metal connection tube to the free end of the short rubber tube attached to these glass jar cups. This piece of metal tubing is for attaching the cup or jar to the rubber suction tube of the water-faucet attachment. By means of such an attachment the cups or jars can be cleaned in a sanitary manner.

(For **hyperemic treatment** over boils, etc., as described on page 249, such a connection tube is imperative.)

The very small glass cup shown in the illustration is especially valuable for treatment about the **clitoris**, as described on page 274.

## **HYPEREMIC TREATMENT FOR THE BREASTS**

Figs. 104, 105, 106, 107 show how hyperemic treatment can be given in a very simple manner for treatment of the breasts. There are many conditions of so-called tumors in the breast which are only localized congested areas. Such "lumps" in the breasts are often diagnosed as cancer, and ruthless operations are performed on same. In my Lecture Course are mentioned several instances where patients have



been referred to me for "cancer of the breasts" and I have diagnosed the condition as benign and cured it in a very short time by the big light and hyperemic treatment.

The **technic** for this work is very well illustrated in Figs. 106 and 107, especially Fig. 106. I like to use the big light for such breasts for about fifteen or twenty minutes before applying the twin-bust jars. Then I allow **gentle suction** to proceed for about twenty minutes, bringing about a very pronounced hyperemic condition of the breast. This aids wonderfully in clearing up localized engorgements of the breast.

Fig. 105 shows a **T-tube**. This can be cut into the tube from the water-faucet attachment, and two or more patients can be treated at one time from the same water-faucet-aspirating device.

Fig. 105 also shows a small air stop-cock which can be cut into each bell-jar tube if so desired. In that way exact regulation can be made for each patient, or each breast, when several are being treated at one time.

## BUST DEVELOPMENT

On page 236 is discussed the development of busts. Mention is made of hyperemic treatment by means of a water faucet apparatus. This device is illustrated in Fig. 104, and the twin and single bell jars that are used over the busts for this work are shown in Fig. 105. These jars of all sizes and shapes can be procured from the Physicians and Dentists Corporation, Canton, Ohio, or they can be procured from your regular dealer in surgical supplies.

The special features of the illustrated jars are described when discussing Mastitis.

Fig. 106 shows how the twin-bust jars can be used along with the powerful radiant light for bust development.

Fig. 107 shows how the twin-bust jars can be used while the patient is sitting.

**Caution:** Do not use too much force with this hyperemic treatment. Just enuf to bring about a good hyperemia to the breast is sufficient, and when so used can produce no harm. The same axiom is true of this work as with any other, that is, "Know the modality that you are using, and use discretion

in your work." **Mild** massage or **mild** hyperemic treatment is far better than when the treatment is given in massive doses.

### **GASTRITIS**

Pages 280l to 280m inclusive discuss Gastric Diseases.

I want to especially mention the fact that many patients complaining of "dyspepsia" are really suffering from pathological conditions in the gall bladder. By carefully examining a patient and mapping out the gall bladder by air-column percussion, I am able to prove that the gall bladder is sensitive by simply pressing on it with the finger. These patients are generally suffering from varying degrees of cholecystitis. It is not a sign that the patient has gall stones because they have an inflammation of the gall bladder. It must be remembered that gall stone is a terminal result and not the initial cause of cholecystitis.

The rational **treatment** for this form of "dyspepsia" is powerful radiant light and heat directed over the region of the gall bladder. For internal medication, probably nothing is better than olive oil, altho there are very many proprietary remedies on the market for this condition.

In many gastric diseases concomitant with pathological conditions in the gall bladder and ducts, I have found the slow sinusoidal current to be very beneficial provided there are no concretions. For such treatment we put the clay electrode over the area of the gall bladder and over that place a sand pad. It is well to put the indifferent electrode in the rectum.

The **Pulsoidal Current** used for five minutes seems to be even better than the slow sine wave used for ten minutes.

#### **Gastric Diseases caused by Syphilis**

I want to especially mention the fact which many physicians do not realize, and that is that many cases of gastric dyspepsia are caused by syphilis.

In using the Bio-Dynamo-Chromatic method of diagnosis I often find patients give the syphilitic MM VR who come for advice regarding "dyspepsia" or some other gastric condition. When these patients are treated with the powerful radiant light over the gastric region and are given the treatment as outlined for syphilis, they make very rapid recovery.

## IODIN THERAPY

The following method of administering iodine internally I have found to be superior to giving potassium iodide or other iodine salts. I dissolve one ounce of pure crystals of iodine in sixteen ounces of alcohol. The patient starts with two drops of this mixture in a glass of milk three times daily with their meals. The number of drops is increased until ten are taken. The patient continues at ten for about a week and then gradually increases the amount up to twenty drops three times a day. None is given for three or four days and then the patient starts with five drops and gradually increases the amount up to twenty drops three times a day. Twenty drops are taken for about a week, then three days are skipped, and patient commences again with five drops, taking as before.

In giving iodine in this manner, the pulse must be watched. If the pulse is accelerated, the iodine must be immediately discontinued. If the pulse is not accelerated, the treatment is given for several months, depending upon the condition for which it is used.

I use this treatment for tuberculosis, syphilis, hyposecretion of the thyroid which is found in some conditions of goiter, and many other forms of malnutrition and faulty metabolism. I also use it in cancer.

Iodine Therapy as above outlined seems to go hand in hand with Oxygen-Vapor Therapy. The combination of the two seems to be ideal for rectifying faulty metabolism, and this is especially true in tuberculosis, cancer and syphilis.

## CIRCUMCISION

On page 275 is discussed circumcision. I want here to call attention to the danger of sub-cutaneous injections for the local anesthesia.

Several cases have been reported to me showing that any of the drugs used for local anesthesia can and often do, permanently paralyze the sensitive nerves about the gland of the penis or clitoris. For this reason, general anesthesia or zone anesthesia (FitzGerald) should be employed.

## FREEZING OF THE SKIN

On pages 127, 151, 252 and 255 is mentioned freezing of the skin. On page 252 is mentioned a specially constructed atomer manufactured for me by the DeVilbiss Mfg. Co. of Toledo, Ohio. This special atomer is shown in Fig. 78. I had many different patterns of this device until the present one, which I think is about right. It has to be used with at least thirty-five pounds of compressed air. It is provided with a shut-off at the intake so as to prevent the escapement of ether from the bottle. The outlet is provided with a closed tip that can be put on when the instrument is not in use.

The special feature of this freezer is a perfect atomizing device with a fine platinum tube outlet over which is an air tube. This air tube lets air blow on the atomized ether as



Fig. 78—Showing my special Freezing Atomer manufactured by DeVilbiss Mfg. Co. of Toledo, Ohio.

fast as it touches the skin, thereby evaporating it and preventing its running down on the skin and causing a very unpleasant sensation to the patient.

Another special feature of this freezing atomer is the fact that one can freeze a very small area. We can freeze an area no larger than a split pea, and it is as effectual as when freezing a larger area.

I do not claim that this atomer can freeze the whole side of the body as quickly as some other design, but in all my writings I have mentioned the fact that freezing a larger space than necessary is a wrong procedure. Find just what area you want to freeze and freeze only that and do not freeze it too much. I have watched freezing for the relief of pain for over thirty years, and must caution everyone regarding



its use, just as I would caution them against the use of any drug. Know the therapeutic agent that you are using, and use discretion in your work.

The following is an interesting case of **Intercostal Neuralgia** cured by **Freezing**:

A lady came to me suffering with great pain thru the chest and thought she had pleurisy or pneumonia. I exhibited the radiations from the 3,000 candle-power lamp over her chest for about twenty minutes and told her to come in the following day if she were no better.

In two days she returned saying the "pleurisy pains" were unbearable. I put aluminum thimbles on my fingers and examined along the spine till I found the sensitive area from which the pain seemed to arise. I found the sensitive area along several of the ribs way around to the sternum.



Fig. 79—Showing Atomer, DeVilbiss Mfg. Co., No. 52

I froze over the vertebrae to which these ribs were attached. The following day she reported that the chest pains had disappeared but she still had pain across the abdomen. I then froze the spines in the lumbar region on the same side as I had frozen for the thoracic pains. This cleared up the case and there has been no return of the trouble for over a year.

## HYGIENE OF THE NOSE AND THROAT

On page 226 is mentioned the use of atomizers and nebulizers. Figs. 79, 80 and 81 represent DeVilbiss Mfg. Co.'s atomers Nos. 52, 54, and 56. The No. 54 seems to have the advantage over the others as the spray tube can readily be

removed and additional spray tubes can be used, which eliminates the necessity of stopping to sterilize between treatments, and also makes it possible to have an individual spraying tube for each patient.



Fig. 80—Showing Atomer, No. 51, DeVilbiss Mfg. Co.

The advantage of No. 56 is that it is equipped with post-nasal tubes M and N and has a lock-nut union for interchangeable tubes.

Fig. 82 shows neublizer No. 80, manufactured by the DeVilbiss Mfg. Co. This nebulizer I have found to be the

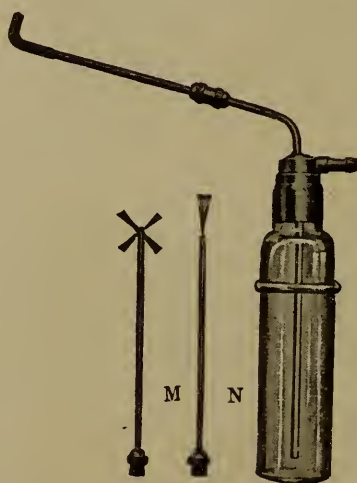


Fig. 81—Showing Atomer, DeVilbiss Mfg. Co. No. 56

best of anything on the market. The metal table inside the bottle is made adjustable so as to regulate the vapor, that is, makes it coarse or fine.

When using atomers or nebulizers, I always keep them warm in a DeVilbiss physician's closed heater No. 515. This

heater is made of one piece of drawn brass, highly polished and nickel plated. A four candle-power carbon lamp is within this heater, which keeps the bottles warm. Never use cold solutions in the nose and throat.



Fig. 82—Showing Nebulizer, No. 80, DeVilbiss Mfg. Co.

Fig. 83 shows the best powder blower for nose and throat work that I know of.

#### Double Nasal Tip

On pages 222 and 223 is mentioned the use of the modified Politzer method of treating diseases of the ear. It also



Fig. 83—Showing Powder Blower No. 73, DeVilbiss Mfg. Co.

mentions that I use for this purpose a double nasal tip. This double nasal tip is shown in Fig. 84. It is manufactured by DeVilbiss Mfg. Co. under the trade number 526.

I have many of these in a sterilizer always ready to use.

The tubes are flexible so they can be bent nearer or farther apart, according to the shape of the nose.



Fig. 84—Showing Double Nasal Tip, No. 526, DeVilbiss Mfg. Co.



## SPINAL REFLEXOLOGY

Pages 113 to 141 discuss spinal reflexes, and quite a little is said regarding concussion for eliciting the spinal reflexes. Probably pounding or prodding of the spine is used more than any other method for eliciting the reflexes because it seems to be the most natural and has probably been used the longest. In fact, no one knows when sudden thrusts of the spine were first used for producing reflexes thru the spine, and altho this work was formerly done in a very crude manner, yet very good results were obtained.

In recent years "concussion" is the name under which prodding or sudden hammer blows on the spine is known. For years I have used this method because I did not know of any better one, altho I have used vibration a great deal to produce the same results. If the proper technic is employed, probably vibration can be used in lieu of concussion, but it is not as efficient a method in the hands of one not thoroly trained in the art of vibration.

I have devised and built many different devices for employing concussion of the spine, and altho I think these devices are as good as anything yet made for this purpose, yet they would not give results that I was looking for, and in many instances the method was very distasteful to the patient. My latest hand concussor is illustrated in Fig. 85. The technic for its use is described on pages 119 to 121. The key to the therapeutic application of concussion is given on pages 122 to 125.

In my experience for tracing out different areas of the spine to see what effect was produced within the body when giving stimulation, I have used the sinusoidal current. In all my writings and teachings of this work, I have stated that the slow-sine wave was the one to use for stimulation or, in other words, to produce reflexes. Inasmuch as I could not find anything in literature regarding the speed of making the intervals between the alterations of stimulating current for muscles, I published an article in the *Journal of Advanced Therapeutics* of March, 1910, calling the attention of physical therapists to some of my experiments which showed that stimulation could not always be given the same

on all parts of the body. I have carried on these experiments now for many years, using electrical currents of all kinds and with all sorts of electrodes and applicators, and have made some very interesting findings.



Fig. 85—Showing Valens Magnetic Concussor. Concussode is of polished aluminum. Ends of mallet are of best rubber gum. Wood is polished Rosewood. Elegant thruout.

## THE SINUSOIDAL CURRENT IN SPINAL THERAPEUTICS—NEW DATA

About a year after d'Arsonval described his alternating magneto-electric current, to which he applied the term, "sinusoidal," Dr. J. H. Kellogg of Battle Creek read at the annual meeting of the Electro-Therapeutic Association in 1893 a pa-

per describing his work with the sinusoidal current and its effects upon the muscles, and consequently upon metabolism.

Since then many people have written and rewritten articles on the subject of the sinusoidal current; but none of them, so far as I can find, have ever been specific regarding the rate of speed at which the alternations should be given. Some have described the use of the sinusoidal current without making any reference as to whether it were a rapid-sinusoidal current or a slow-sinusoidal current.

The regular alternating current (AC), such as is used for electric lighting, is in reality a rapid-sinusoidal current but it has not been very successfully used as a therapeutic measure.

In all my work where I have wished to produce stimulation, I have used the slow-sine wave, that is, an alternating current, without any special polar effect and alternating its cycles slowly enuf to allow the muscles acted upon to come back to rest before the succeeding impulse is given.

For the past two or three years I have been experimenting with the rapid-sine wave, or the regular alternating current, used in a manner which as far as I know is original with me. I put a hand interrupter in series with one of my conducting cords and, holding that in one hand and taking hold of the patient's pulse with the other hand, I would make and break this current synchronously with the heart beat. This I have described in some of my writings and lectures as "stimulation synchronous with the heart beat." When giving this form of treatment to a person with tachycardia, my hand became so tired that I could not carry on the experiment in the manner I wished.

I took a Maelzel *métronome* and so arranged it as to make and break the current at any speed I wished. By watching the contraction of the muscles, I observed what I wrote about years ago—that the large muscles did not have time to come back to rest while being stimulated at a rapid rate. I then began experimenting with the respiration as the basis of speed for the making and breaking of the stimulating current. Taking my cue from the normal rate of the heart beat in proportion to the respiration (the physiologic rhythm), that is four to one, I would ascertain the respiration of the



patient and set the oscillating rate of the metronome to four times that of the respiration. I immediately found that I was obtaining results that I had never been able to with any other method of spinal stimulation.

I then began using this same current interrupter in like manner for vaginal and rectal treatments and found that for treating those parts I obtained therapeutic results in a shorter time and more effectually than by any other method I had ever used.

When I looked into this more thoroly, I found that my interrupter was so arranged that one beat made a longer

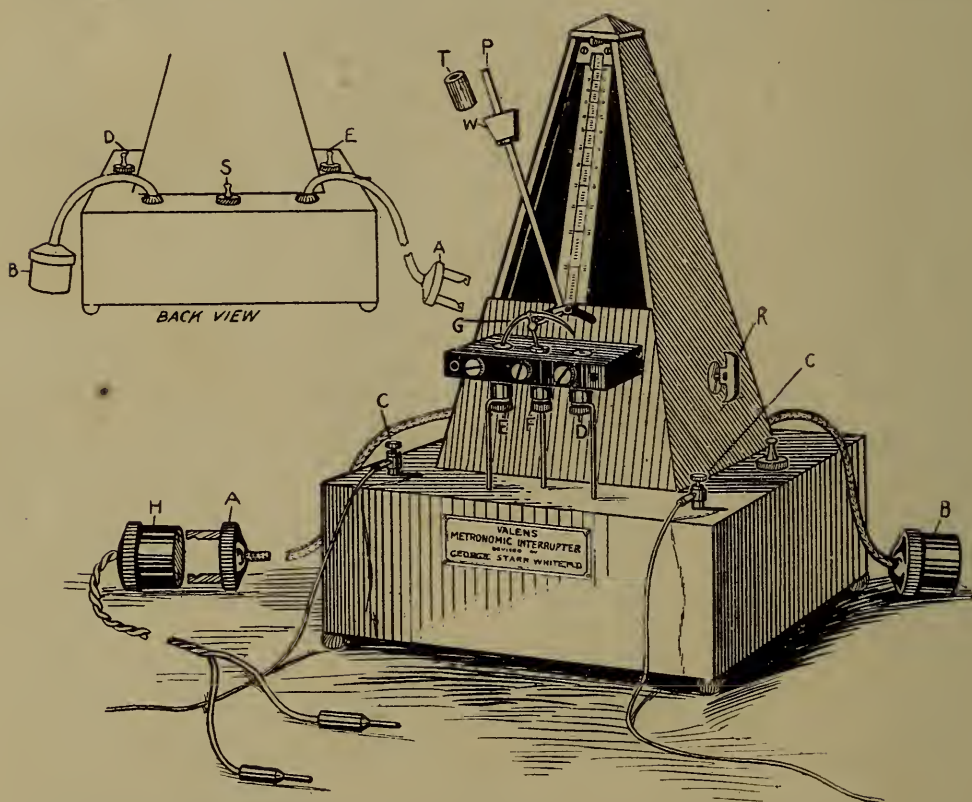


Fig. 86—Showing Valens Metronomic Interrupter, Style D, for producing the *Pulsoidal Current*

electrical contact than the other. I then tried making the intervals between the contacts equal, but did not get the same results as when the intervals of stimulation were uneven.

### Rate of Respiration Guide to Amount of Stimulation

In my experiments I found that to produce reflexes in various individuals it required a greater amount of stimula-



tion when the respiration was at the rate of fifteen to the minute than if it were twenty to the minute. This held true in the same person and in different persons. For example, if a person has a respiration of fifteen it requires greater stimulation to produce the same results than if he has a respiration of twenty. The reason for this seems to be very plain. If a person is breathing slowly, he is generally cool and collected and it requires more to stimulate him than if he is excited and breathes rapidly, and a person who normally is of a plethoric disposition or breathes slowly requires more stimulation than a nervous or excitable individual who breathes more rapidly. At any rate, the rule seemed to hold good—that the stimulation required for exciting reflexes is in direct ratio with the rapidity of the respiration, other conditions being equal. Of course we have to take into consideration the resistance of the skin in different individuals.

At first I did not know how I was going to gauge the stimulation to meet the condition of the patient, but when watching the effects of my metronomic interrupter I found that the slower the instrument oscillated, the longer the contacts were, and consequently I was giving more stimulation to the individual the slower the instrument oscillated.

From these findings I devised the instrument shown in Fig. 86 which I call the **Valens Metronomic Interrupter**.

## VALENS METRONOMIC INTERRUPTER

### Description

Fig. 86 shows the front of this device as well as the back of it.

The apparatus is made of birch, mahogany-piano finish, The mercury-dip platform is made of polished fiber. Each part is made of the very best material suitable for its particular use.

This Interrupter is so made that it can be used for interrupting a 110-volt lighting circuit and thereby it can be used for giving Bio-Dynamo-Chromatic Therapy (intermittent light treatment); or it can be used for taking the current directly thru a current controller and interrupting it.

**H** represents the cord and receiving terminal that is attached to any form of current controller.

**A** is the terminal of the receiving or feeding conductor to the instrument.

The current passes into the back of the base and is carried to the mercury dip wells **E, F**, and **D**. **F** is continually in contact with the walking beam **G** while **E** and **D** are in contact only when the pendulum **P** oscillates.

**K** is the key which winds up the clock movement in this instrument, which causes the pendulum to oscillate. One winding will run the mechanism for about forty-five minutes.

**C, C** are the binding posts to which the patient terminals are attached.

**T** is a little piece of rubber tubing which, when placed over the pendulum **P**, holds one side of the walking beam in contact with the mercury and therefore allows the uninterrupted current to pass thru it. This is used when one wants to dissipate a reflex or cause relaxation.

**W** is the weight that can be moved up and down on the pendulum and regulates the intervals of the oscillation.

Back of this pendulum is a graduated scale marked off in numbers representing the beats to each minute.

The walking beam on the side that enters the mercury dip-cup **E** is a little shorter than that which enters the mercury dip-cup **D**.

The plunger switch **E** cuts out or puts in the mercury dip-well **E**.

These mercury dip-wells are filled with mercury up to within about 1-32-inch of the top. The top is so arranged that the mercury will not spill under ordinary conditions.

Connecting rods go from the mercury dip-wells **E, F**, and **D** to flexible connections within the base so that these mercury dip-wells may be lowered or raised to make the length of the stimulation as much or as little as one may desire. For example, if the mercury dip-well is elevated, the walking beam contact will be just so much longer in the mercury. If the dip-well is lowered, the duration of the stimulation will be just so much less.

Plunger switch **S** controls the condenser in the base of this instrument so that the current may be taken directly off

a 110-volt circuit, passed thru the condenser and out at **B** for intermittent light treatment.

When the current is taken off the terminals **C,C** the plunger switch **S** must be off to obtain the **intermittent** current.

When the patient is being treated directly from the terminal posts **C,C** the current must **always** be taken thru the current controller.



Fig. 87—Showing the "Sinustat" Sinusoidal Current Controller, manufactured by Ultimo Physical Appliance Co. of Chicago

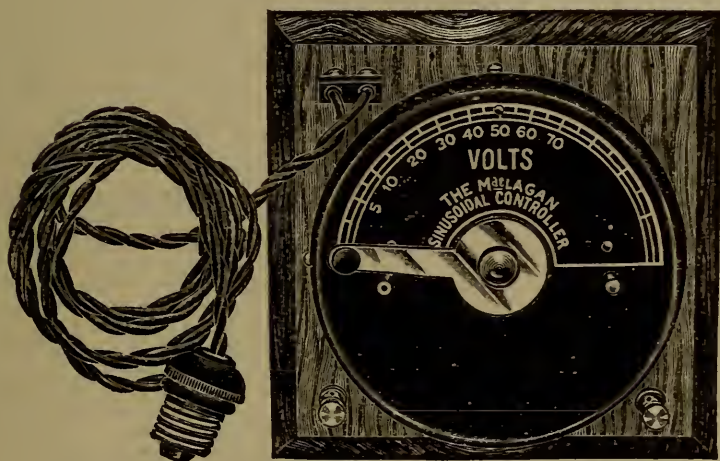


Fig. 87A—Showing the MacLagan Sinusoidal Controller manufactured by McIntosh Battery & Optical Co. of Chicago

If for any special condition we wish to use only the mercury dip-well **E**, we would raise the plunger switch **D**, which would cut out that mercury dip-well.

Should we wish to use only the mercury dip-well **D**, we would raise the plunger switch **E** and thus cut out the mercury dip-well **E**.

For all ordinary treatments, we would have both plunger switches **D** and **E** down, that is, "on."

When the two mercury wells are in operation, the current is broken up as shown in A, Fig. 88.

### **The Current Controller or Rheostat**

Any reliable controller will answer, the simplest and most practical of which are probably the "sinustat" manufactured by the Ultima Physical Appliance Co. of Chicago and illustrated in Fig. 87 or the MacLagan sinusoidal controller manufactured by the McIntosh Battery & Optical Co. of Chicago and illustrated in Fig. 87A. If a physician has a wall plate with a rheostat in it, that can be used. In fact, any device for controlling the rapid-sine or alternating current from one volt up to seventy or one hundred will answer the purpose.

## **THE PULSOIDAL CURRENT**

### **Its Various Modes**

Figs. 88 and 89 graphically show just how the alternating or rapid-sine current is broken up into modes when it passes thru this **Metronomic Interrupter**.

**Six distinct Modes can be gotten from the alternating current thru this instrument.**

**Mode A** represents the current when both mercury dip-wells are in operation. It will be noticed that the current is **unevenly broken**. This modality is generally used unless there is some special indication for using some of the other methods of breaking up the current.

**Mode B** represents the current when the mercury dip-well **E** is off.

**Mode C** represents the current when the mercury dip-well **D** is off.

**Mode D** represents the current when the condenser switch **S** is on and both mercury dip-wells are in use.

**Mode E** represents the current when the mercury dip-well **E** is off and the condenser switch **S** is on.

**Mode F** represents the current when the mercury dip-well **D** is off and the condenser switch **S** is on.

**RS** represents the alternating current passing thru the instrument when the piece of tubing **T** holds one end of the walking-beam **G** in the mercury dip-well, as shown in Fig. 86.



Six distinct Modes can be gotten from the direct current thru this instrument.

The galvanic or direct current can be broken up thru the **Valens Metronomic Interrupter** as well as the rapid-sine, or alternating current. One then gets an **interrupted galvanic current**, which is valuable in many conditions.



Fig. 88—Shows graphically the modes of current as given thru Valens Metronomic Interrupter when the alternating or rapid-sinusoidal current is passed thru it. Each line represents a cycle of one full respiration.

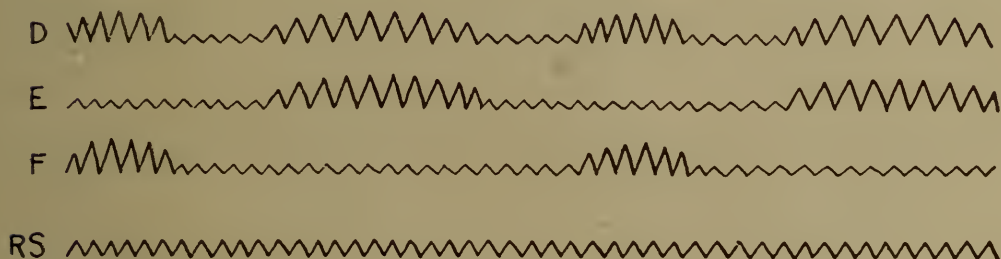


Fig. 89—Shows graphically the modes shown in Fig. 88, when the Condensor is used in the Valens Metronomic Interrupter. RS represents the rapid-sine current not interrupted.

### Method of Using Valens Metronomic Interrupter

The manner of procedure is to ascertain the rate of respiration of the patient, multiply that by four and set the weight of the pendulum opposite that number. For example, if the respiration is eighteen, I set the metronome to oscillate at the rate of seventy-two beats to the minute.

Thru various forms of hand electrodes, I then use a bifurcated cord to conduct one side of the current while the other side is connected to a regular sponge electrode and applied over the spine at whatever area I wish to stimulate.

Inasmuch as I use the rapid-sinusoidal current and interrupt this current at the rate of the **normal** pulse, I have named this current the **Pulsoidal Current**.

The term, **Pulsoidal Current**, therefore implies a rapid-sine current or an alternating current irregularly broken in cycles of four attacks to each respiration. Instead of using four attacks to each cycle, two attacks can be made under certain conditions. This cyclic stimulation is graphically shown in Figs. 88 and 89.

So far the results achieved from this modality have been phenomenal.

This same modality can be used for rectal, vaginal, or any other treatment where we can use the slow-sine or static-wave current.

By stimulating over the second and third cervical vertebrae by this method, the heart-beat can be greatly influenced. In fact all stimulation that can be given over the spine can be made by this method, and the results obtained I have not been able to arrive at by any other method. This method of using spinal stimulation is opening up an entirely new field, and it is worthy of an extended study.

The simplicity of the device and the exactness of the method make the modality very practical. If the physician has an alternating current in his office, all he needs is a current controller to be placed in series with this Metronomic Interrupter. If he has a direct current and has a transformer for making the rapid-sine current, that same current can be carried thru this Metronomic Interrupter.

### **Spinal Electrode Holder**

Figs. 90, 91, 92 show a special x-ray tube holder that VanHouten & TenBroeck of New York City built for me a good many years ago. It was described in the *Journal of Advanced Therapeutics* of March, 1910.

An ordinary x-ray tube holder can be used for this purpose by having an extra clamp put on it.

In these figures **A** represents the ordinary wood-clamp rod.

**B** is an extra rod that can easily be put on by any good mechanic.

**C** is the friction ring which holds the adjustable upright at any height desired.

By using such an electrode holder, two different areas of the spine can be treated at one time without having the patient disrobe and while they are sitting up.



Fig. 90—Showing the Pulsoidal Current being used thru my binocular sponge electrode and over 2d and 3d Cervical Vertebrae.

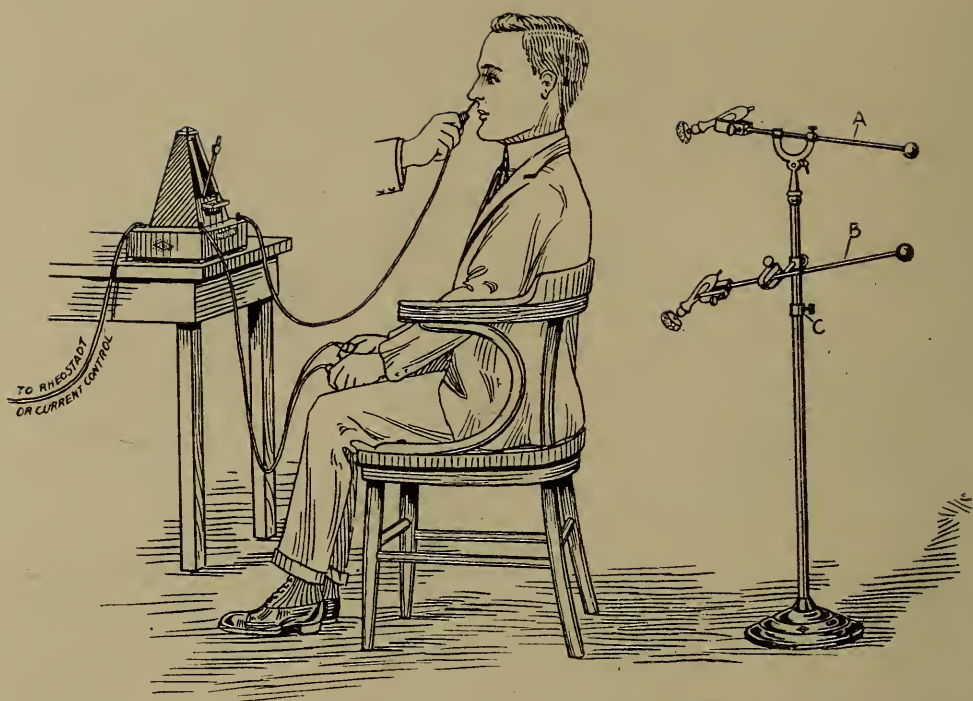


Fig. 91—Showing the Pulsoidal Current being used for Zone Therapy application thru my uni-polar-nasal electrode.



Fig. 92—Showing the Pulsoidal Current being used for Zone Therapy application thru my Tongue-Pressor Electrode



## NERVE PRESSURE AND PAIN

Dr. Harlan P. Cole of New York in his paper read before the National Society Physical Therapeutics in 1915 \* well said:

"If pressure on the brachial plexus or upon the popliteal or sciatic nerve, will produce numbness or pain along the line of the nerve or at its termination, it would be equally true that pressure upon any nerve at its exit from the interspinal foramen would produce numbness or pain, or interfere with its functions, at any or all points between the point of pressure and the termination of its branches."

Dr. Cole also discusses the fact that pain along a nerve or at its termination is caused by congestion and effusion upon terminal nerve fibers. These terminal nerve fibers are very numerous along the spinal column. Neuritis, rheumatism, gout, etc. appear to come under the broad head of "Pain Caused by Pressure."

The aim therefore of any therapeutic procedure for "rheumatism," "neuritis" or any of the symptoms relating thereto, must be to **relieve pressure**. All the pains and aches that come under the various names coined to mean "pain from pressure" can be relieved by relieving stasis. Stasis can be caused by mechanical pressure from a foreign body pressing on any part of a nerve, and the pain will be described as coming from the distribution of that nerve, or from the point of pressure. Pressure can just as readily be caused by stasis from impaired blood supply (congestion) as from a "foreign body."

Any agency that will relieve stasis, must therefore go a long ways toward relieving pain and curing the cause.

Probably the most efficient agency for relieving stasis is powerful radiant light.

Next comes massage. Massage can be manual or mechanical, but probably the latter is the better for most conditions.

As a mechanical method of massage, probably the sinusoidal current or the static-wave current are the best. Of course the vibrator or concussor can be used, but they do not

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\*Published in the July, 1916 issue of Journal of A. I. H.

seem to meet the requirements as well as the electrical currents. High frequency currents also can be used to relieve stasis, but the best of all modalities seems to be the sinusoidal current, if used in the proper manner.

The **Pulsoidal Current** seems to meet all the requirements better than any other modality, after considering radiant light and heat.

When it is considered that the **Pulsoidal Current** is a rapid sinusoidal or alternating current, peculiarly intermitted in the "physiologic rhythm" the reason for this is apparent.

### ERGOTHERAPY

On page 202 is mentioned Ergotherapy. It really means treatment by physical effort. I have been doing a good deal of work along these lines and many of my pupils have also, and I am receiving nothing but flattering reports from them.

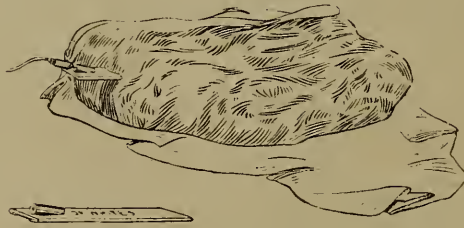


Fig. 93—Showing a clay electrode and my special cord-tip insert for same.

On page 153 is mentioned about clay electrodes. Fig. 93 represents a piece of moistened clay made according to directions given on page 153. It will be noticed that there is a piece of cheesecloth covering this clay pad. This piece I keep on all the time so as to hold the shape of the clay and make it easier to handle. These clay pads are made of any convenient size, depending upon the part of the body over which they are used. For the abdomen, from four to five inches square is about right. For the breasts about three or four inches square is needed. I keep these clay pads in an electric instrument sterilizing outfit which has a false bottom raised up so the water does not touch the pads. In this way the pads are heated by steam very quickly and the steam keeps them moist.

Over the patient's skin I place a piece of plain cheese-cloth that has been wet in plain warm water. On this is placed the covered clay pad. By following out this technic a clean piece of cloth is always used on the patient's body, and the procedure is a sanitary one.

The little conducting-cord attachment (cord tip insert) that is shown in this figure is made of copper, and the connector for the cord tip is soldered on at a slant. I devised this cord tip insert so as to lift the metal tip up and have it so it would not touch the bare skin of the patient. These little copper, clay-pad, cord-tip attachments are manufactured by the McIntosh Battery and Optical Co. of Chicago.

Fig. 94 shows the Sand Pad that I use for the Ergotherapeutic work and for covering of all the clay pads. This sand pad is about fourteen inches long, nine inches wide and thick enuf to make it of any desired weight. The best method of arranging this is to have one pad weigh ten pounds, another



Fig. 94—Showing a sand pad such as I use over clay electrodes as illustrated in Fig. 72

fifteen pounds, and another twenty-five pounds, the weight depending upon the part of the body we want to treat.

These sand pads are made as follows:

A regular bag is sewed of the correct size and then turned wrong side in. The required amount of sifted beach sand is put in after it has been thoroly baked and sifted. The bag is sewed up and another bag of heavier muslin is put over that. Over that is put a bag made of stork sheeting so as to make it waterproof. If the sand is kept in this manner, it will always conform to any shape that is desired.

Fig. 72 shows how I use one of these sand pads on the patient's abdomen. I first place the clay electrode on the abdomen as before described. Then I connect the conducting-cord, **C**, to the clay pad terminal. **B** represents a piece of rubber tubing slid over the conducting-cord and pushed up close to the clay pad terminal. The reason for this is that

when a weight is placed over the conducting-cord, the moisture from the pad will cause the current to leak thru the cord to the body and make the treatment very unpleasant to the patient. By putting on this piece of tubing this annoying trouble is avoided.

Over the clay pad is then placed the sand pad, **A**. This holds the clay pad very closely to the abdomen and as the electric current is passed thru it, the muscles will have to do enuf work to move the weight of the sand pad before the sand pad will move.

This is a great adjunct to electro-therapeutic treatment.

If the breasts were being treated one clay pad could be put over each breast or a large one could cover both breasts. Over them is placed a suitable sand pad. One terminal is used at one breast and the other terminal at the other.

When I am treating the breasts and vagina or rectum at the same time, I use a bifurcated cord to the breast pads.



Fig. 95—Showing a patient cured of persistent backache by giving sinusoidal current over breasts, thereby reducing their weight and strengthening the muscles.

This figure, 72, shows exactly how I treat the patient, having one electrode in the vagina or rectum and the other over the abdomen. It will be noticed that I have the powerful candle-power lamp directed over that part of the body which is not covered with the pad. In the case illustrated, the abdomen and rectum are being treated and the big light is shining on the bare chest.



If I were treating the breasts, I would have the light shining on the bare abdomen. This lamp, being from twenty-eight to thirty-two inches away from the body, allows the radiation to reach at least half of the body at one time altho it is focused over the part that I want to have a special amount of heat and light.

If I wish to reduce fat on any part of the body, such as the thighs, busts, or abdomen, I place the clay pads as above described and use very heavy sand pads.

The current I use for reducing fat is the **Pulsoidal Current**, Mode A, Fig. 88, or Mode D, Fig. 89.

Probably Mode D reduces the fat faster than the other modalities. It might be well to use Mode A five minutes and then use Mode D five minutes, at a séance. I find this current reduces flesh and promotes elimination as well as an interrupted faradic current without the disagreeable sensations that one generally gets from the induced current.

For strengthening the muscles, reducing fat, creating intestinal peristalsis, and in fact for any Ergotherapeutic work, I do not know of any procedure that can compare with this.

On page 132, Case IV, is mentioned a case of a lady with heavy mammary glands. This patient is illustrated in Fig. 95. It might be interesting to know that this lady has had no return of her spinal pains since the treatment I gave her. This treatment also reduced the size of her breasts about one-half.

## PELVIC DISEASES

On pages 267 to 273 is mentioned different methods of treating pelvic diseases in women by means of my Vaginal Electrode and Uterine Elevator. Following out the technic as described under the head of the **Pulsoidal Current** and Ergotherapy, much better results can be obtained than by using either the slow-sine current or the static-wave current.

### Vaginal Electrode

On page 269 is mentioned a uterine elevator and electrode which I have devised. This electrode was first made out of spun copper to be used for static electricity. Later I

had it made of solid aluminum to be used with the galvanic or sinusoidal current. This electrode is illustrated in Fig. 96. It is manufactured by the McIntosh Battery & Optical Co.

For dysmenorrhea and other conditions where an electrode of this nature is indicated, I have found this electrode to be better than any other.



Fig. 96—Showing Dr. White's Uterine Elevator and Vaginal Electrode made by McIntosh Battery & Optical Co., Chicago.

This Uterine Elevator and Vaginal Electrode is also ideal for use with the **Pulsoidal Current**, as illustrated in Fig. 72.

### Vaginal Syringe

On pages 271 and 272 is mentioned the kind of vaginal syringe that I recommend. This is illustrated in Fig. 97.



Fig. 97—Showing an ideal Vaginal Syringe made of soft rubber by Goodyear Rubber Co., New York City.

### Tampon for Cervicitis

On page 216 is mentioned a cotton tampon used for packing the cervix uteri. As many pupils do not understand how

this tampon is made, it is fully illustrated in Fig. 98. No. 1 shows a piece of braided silk about six inches long. This is tied into a knot, as shown in No. 2. Then a piece of cotton is put in the hand, the knot is placed in this cotton and a wooden applicator, after being wet in antiseptic solution, is twisted on, as shown in No. 3 and No. 4. No. 5 shows a spiral tube thru which the wooden applicator shown in No. 4 is passed. This tampon, when arranged as in No. 5, is placed into the cervix uteri after first being wet with carbenzol, thollo, ichthyol, or some other suitable oily antiseptic solution. By holding the tube and pulling out the applicator with the fingers, as shown in No. 5, the tampon will remain in the cervix for several hours before uterine contractions expel it.

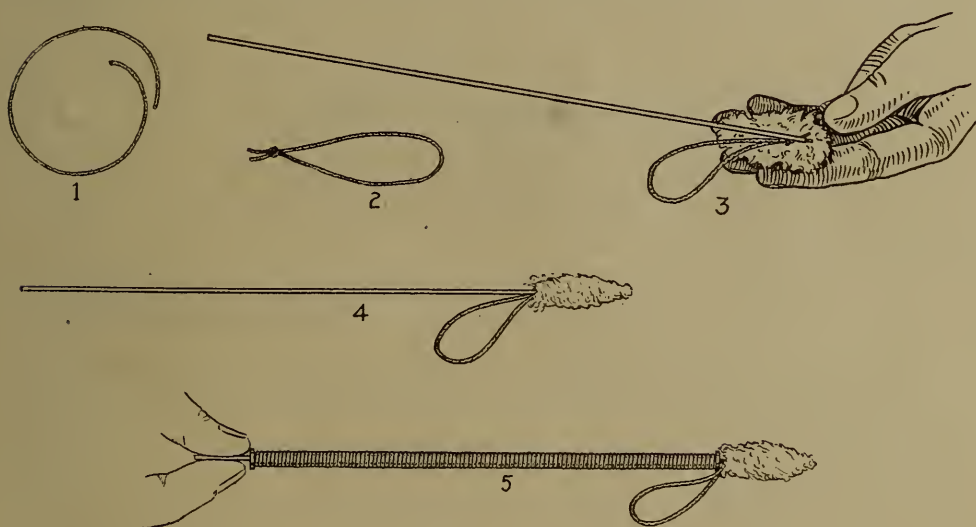


Fig. 98—Showing the various steps in making the Cervical Tampon devised by the writer. 1, represents six inches of braided silk. 2, the same tied into a loop. 3, placed on cotton to be rolled. 4, rolled on a wooden applicator. 5, propelling tube on applicator stick ready to force the tampon off the applicator stick, after the tampon has been inserted in the Cervix Uteri. The Spiral Tube 5, made by Knauth Bros., New York.

This same method of tamponing the cervix is very useful for removing many reflex conditions, and also for dilating the cervix if it is too much contracted, which is sometimes the case in spasmodic dysmenorrhea.

It is well to make up a quantity of these tampons of various sizes and keep them in a receptacle with formaldehyde solution, on gauze in the bottom, so they will always be sterile and ready for use.

## CONSTIPATION

Fig. 72 shows a patient being treated for chronic constipation by means of my Rectal Dilator and the **Pulsoidal Current**.

On pages 276 to 279 is discussed Constipation. The best treatment that I have found is by means of the **Pulsoidal Current** passed thru my Rectal Dilator (Fig. 99), together with the wearing of an Abdominal Support that supports. (See Fig. 68.)

Some of the clinical cases which are appended will give an idea of what this modality will do.

This figure is drawn from life while the patient mentioned in Case IX under **Clinical Reports Metronomic Interrupter** is being treated with the rapid-sine wave **Pulsoidal Current**.



Fig. 99—Showing Valens Rectal Dilator and Electrode. Made of solid aluminum.

## RECTAL DILATION AND STIMULATION

On pages 280 and 280a is discussed Rectal Dilation. For this I use my solid aluminum **Rectal Dilator**, illustrated in Fig. 99, and give the **Pulsoidal Current**.

By placing the rubber tube **T**, shown in Fig. 86 over the end of the pendulum **P**, of the Metronomic Interrupter, a current can be passed thru without its being interrupted. The electrode is lubricated with iodex and the tip placed into the anus. I then turn on the rapid sine current as strong as the patient can bear it, at the same time giving steady pressure on the electrode. Within two or three minutes the sphincter will become relaxed and the electrode will enter without any trouble. Then I take off the tube **T** and set the Interrupter at four times the respiration, and carry on the treatment for ten minutes, having the clay pad electrode and sand pad over the abdomen, as illustrated in Fig. 72. This not only gives rectal dilation but rectal stimulation, which is very beneficial in many conditions.



## Rectal Diseases

It is a well known fact that many insidious complaints are caused by relaxation of the lining membrane of the rectum and colon. Pruritus ani and herpes ani, and eruptions in the gluteal region surrounding the anus are often caused by an unhealthy condition of the mucous membrane at the lower end of the large intestines.

**Impotency and frigidity** are many times caused by a diseased condition of the large intestine. Altho I have used all forms of electrical treatments and galvanic stimulation, I have never found any that could compare with the **Pulsoidal Current** when using the mode of current graphically shown in A, Fig. 88, having the indifferent electrode placed as above cited. This produces a stimulation thru the intestines that is indeed remarkable. Along with this treatment I give powerful radiant heat and light over the abdomen.

The following **Clinical Case** is quite typical. A married lady about thirty-five years of age presented herself for treat-



Fig. 100—Showing my new style Hemorrhoidal Electrode. Manufactured by McL. B. & Op. Co., Chicago.

ment for constipation. Incidentally she stated that she had been a "frigid" for about ten years and she had been suffering from severe constipation about fifteen years. After having received daily treatments as illustrated in Fig. 72 for about three weeks she said she was **cured** and wished I would give the same treatment to her husband. I asked her if he, too, suffered from constipation and she replied, "No, but——."

### Electrical Treatment for Hemorrhoids

On pages 279 and 280 is given the electrical treatment for hemorrhoids. There are several objections to the electrode there described. The entering end of the electrode is too large and blunt and the part that comes next to the round rubber ball is insulating material tho it should be copper.

As I could find no electrode that met my views, I designed the one shown in Fig. 100. It is now manufactured by the McIntosh Battery & Optical Co., Chicago. Notice that

the shape is conical so that it will enter the rectum without any trouble. Notice also that it is copper way up to the rubber ball. An electrode made in this manner is easily placed into the rectum and the copper cataphoresis can take place way down around the edge of the sphincter and where it is needed for hemorrhoidal treatment. The rubber ball keeps the electrode from going in too far. To this rubber ball is attached a regular screw to which a regular style electrode handle is placed. Such a handle as this allows the cord tips to be free from the thighs, which is not possible with the old style hemorrhoidal electrode. It gives the patient a very unpleasant shock to have a bare metal tip strike against the thighs while this treatment is given. This electrode prevents this.

I cover this copper electrode with cotton cloth and perforated gold beater's skin, as described on page 280.

### Bi-polar Rectal Treatment

On page 280a is mentioned my original method of using a bi-polar electrode in the rectum. This electrode is illustrated in Fig. 101, description of which is as follows:

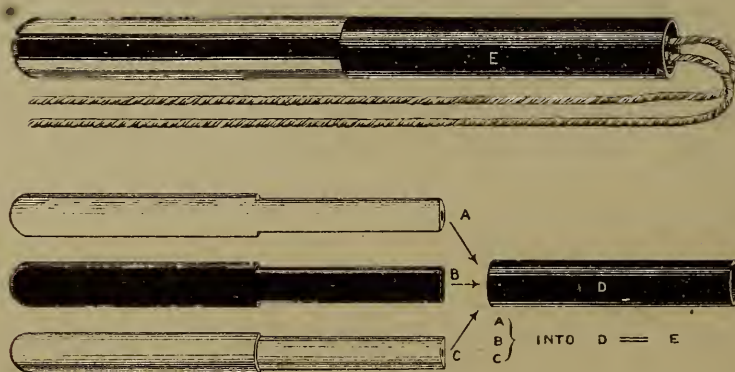


Fig. 101—Showing Dr. White's Bi-Polar Rectal Electrode. *A* and *C* are metal. *B* and *D* are fiber. Cord tip holes are shown at *A* and *C*.

*A* and *C* are two metal parts between which is placed a rubber or fiber insulating material, *B*. These three parts, when put together, make a round applicator which fits into the insulating handle, *D*.

In the handle end of *A* and *C* are holes in which are placed standard cord tips. We pass the two battery cords thru the tube *D*, place the tips into the holes *A* and *C*, and then slide the ends *A*, *B*, and *C* into the tubular, insulating

handle. When it is all together, it is as shown in E of this Fig. 101.

### Technic

In using this electrode, I lubricate it and place the metal parts antero-posteriorly. In that way electricity goes to the anterior part of the rectum, which will have a beneficial action upon the uterus or prostate. The other side will come in contact with the posterior wall of the rectum where I especially wish to produce stimulation. The use of this electrode is described on page 280. I use the **Pulsoidal Current**, Mode A, or the slow-sine current.

The benefits derived from the use of this electrode have been more than satisfactory, and I have received complimentary reports from all over the country from physicians who are using it. ....

This electrode is manufactured by the McIntosh Battery & Optical Co. of Chicago.

### Prostatic Hypertrophy

For treating Prostatic Diseases, I use my Bi-polar Rectal Electrode (Fig. 101), having the metal parts placed antero-posteriorly. In this way we get a profound contraction in the rectum and thru the prostate. I employ the **Pulsoidal Current**, Mode A, for five minutes or the slow sinusoidal current for ten minutes.



Fig. 102—Showing position for deep abdominal breathing exercises. Notice the hand on the abdomen. The patient should watch the hand and see how high she can elevate the abdomen at each inspiration.

### DEEP ABDOMINAL BREATHING

On page 142 is described the technic I have found, after thirty years of experience in gymnastics, to be the best for **deep abdominal breathing**. The position there described is illustrated in Fig. 102.

## BINOCULAR ELECTROTHERAPY

On page 280t is mentioned my original method of Binocular Electrotherapy. Altho I have searched books on spinal reflexes, I have never found any allusion to the employing of the 2d and 3d cervical vertebrae for changing blood pressure or especially altering the metabolism.

While using a binocular sponge electrode over the eyes, following out the technic of Dr. Coleman of Chicago, I began experimenting with different areas of the spine for the indifferent electrode. I found that I obtained entirely different results when placing this indifferent electrode over different spines.

After observing what seemed to be remarkable results obtained by some in manipulating the neck, I began a series of experiments to see just why certain results were obtained. By placing the indifferent electrode over the 2d and 3d cervical vertebrae, that is, at the nape of the neck, I found that I obtained some results that I could not obtain from any other region. For example, while using the electrodes as shown in Fig. 90 and employing the **Pulsoidal Current**, Mode A (Fig. 88), I obtained results that I never obtained when using electrodes in any other way.

I found the **blood pressure** could be lowered or raised, that is, stabilized or normalized, and that the patient had a feeling of well being similar to what I had secured when treating the same patient with auto-condensation. I also found that if a patient came in complaining of feeling tired and "out of sorts," if I used the modality as here illustrated for about ten minutes, they would feel greatly refreshed. This was especially noticeable if the treatment was given in the afternoon or evening when the patient would say after the treatment that he felt "like starting another day's work."

I also observed that if these patients wore glasses, their glasses did not fit for several minutes after the treatment. In many cases I observed that these same patients could get along without glasses after having a few of these treatments.

In speaking of the treatment of **goiter**, it will be noticed that I mention that the indifferent electrode is placed over the 2d and 3d cervical vertebrae. Clinical experience has proved that this is the best location.



My technic for treating **high blood pressure** by this modality is to place the binocular sponge electrode over the eyes and the other electrode over the 2d and 3d cervical vertebrae as shown in Fig. 90. I use the **Pulsoidal Current**, Mode A, (Fig. 88) giving a current just strong enuf to be comfortable. Treatments to last ten minutes to fifteen minutes daily.

Fig. 103 represents the **binocular sponge electrode** that I have devised for this work. It will be noticed that there is



Fig. 103—Showing Dr. White's Binocular Sponge Electrode

no metal protuberance in the center of the curve to burn the nose. This electrode is manufactured by F. A. Hardy & Co., Chicago.

### **An Explanation of this Phenomenon**

The explanation of the effect of this modality upon the eyes is quite simple. It tones up the musculature of the eyes and relieves a certain strain that the eyes have been under. By relieving this strain we are giving to the rest of the body much of the energy that has been exhausted by the eyes. Some writers claim that one-sixth of the energy of the brain

is consumed thru the optic nerve, and if this is the case, we can readily see why relieving of the tension and exhaustive strain from the optic nerve from this stimulation is so productive of good.

The explanation for the lowering of an abnormally high blood pressure or raising an abnormally low blood pressure, is not quite so easy, but from my observations I think it is thru the pituitary body. Stimulating the 2d and 3d cervical vertebrae seems to have a selective action upon the internal secretions (hormones), and I cannot explain it in any other way unless it is thru this body at the base of the brain.

According to anatomies, there are branches of the sympathetic nerve connected with the pituitary body. These branches are distributed in the region of the 2d and 3d cervical vertebrae. According to the hormone theory of Starling, if we influence the hormone in any one of the internal secreting organs, we influence the hormone in **all** of the internal secreting organs. Sejous, in his work on internal secretions, goes into the influence of one internal secretion upon another very extensively, but the hormone theory seems to elucidate a great deal of Sejous' original work. Regarding hormones see page 486.

## THE PULSOIDAL CURRENT

### Indications and Technic for Its Use—Recapitulation

On pages 122 to 125 is given locations for treatment over the spine. These same locations will answer for the **Pulsoidal Current**.

Figs. 90, 91, 92 show how an x-ray tube holder can be used for holding one or two sponge electrodes for use with this modality. The lower sponge electrode is used over the sacrum and the upper over any area to be stimulated.

When stimulating two areas of the spine, one must take into consideration just what they want to do and not use one area that will neutralize another. For example, stimulation of the 11th thoracic vertebra dilates the uterus while stimulation of the 2d lumbar contracts it. Therefore they cannot be used together. Stimulation of the 5th thoracic ver-

tebra dilates the pyloric end of the stomach while stimulation of the 2d lumbar contracts it. Therefore it would be irrational to stimulate both of these areas at one time. As a rule it is best to use the indifferent electrode on the sacrum and use the other over the indicated area; or one can use hand electrodes by means of a bifurcated cord for the indifferent terminal, and the indicated area on the spine for the other.

Fig. 103 shows my special Binocular Sponge Electrode, and Fig. 90 shows the **Pulsoidal Current** being given thru this binocular sponge electrode, while the other sponge electrode is held in a stand and placed over the 2d and 3d cervical vertebrae.

In giving this binocular treatment, I use just enuf current to have the patient comfortable.

**Do not use too strong a current over the eyes.**

I use this treatment for blephorospasm, inequality of muscular tension, general ocular fatigue, general bodily stimulation or relaxation, "overwrought nerves," and for regulating or normalizing the blood pressure.

Fig. 99 shows my Rectal Dilator that I use with this **Pulsoidal Current**.

Fig. 101 shows my Bi-polar Rectal Electrode that I also use with this same modality.

Fig. 96 shows my Vaginal Electrode and Uterine Elevator which I use with this current.

Fig. 72 shows a patient being treated for chonic constipation by means of my Rectal Dilator. This same figure shows how treatment is given thru the vagina.

For all these uses of the **Pulsoidal Current**, I use the Mode A, graphically depicted in Fig. 88.

**For reducing fat** the **Pulsoidal Current** appears to be ideal. The clay electrode used for this purpose is shown in Fig. 93 and the sand pad that I use over the clay electrode is shown in Fig. 94.

For reducing fat, Mode A or Mode D can be used as strong as is comfortable. I find it is a good plan to give five minutes of this treatment with Mode A and five minutes with Mode D.

Use sand pads as heavy as can be comfortably borne.

Treatment for the reduction of two or more areas can be carried on simultaneously.

The time for all these treatments with the **Metronomic Interrupter** is ten minutes. I never give longer than that and in some cases do not give over five minutes, especially when treating thru the spinal reflexes. **Over-stimulation produces relaxation**, and we must not forget that. **Use a mild current** I think it is safe to say that five minutes is enuf for treating anywhere thru the spine, but for treating thru the rectum or vagina, the treatment can be given for ten minutes.

For regulating blood pressure the treatment can be given for fifteen minutes.

Generally speaking, wherever I heretofore used the slow sinusoidal current, I now use the **Pulsoidal Current** as I find it gives more definite results and can be used in a more definite and scientific manner. It is not so much the interrupting of the alternating current as it is the **mode** of use that produces the results.

The regulating of the pulsations of the current according to the "physiologic cycle," that is four pulsations to each respiration, individualizes this method of treatment.

Under the head of Zone Therapy the use of this **Pulsoidal Current** is discussed along with special electrodes that I have devised for Zone Therapeutic work.

### **The Pulsoidal Current for Intermittent Light Treatment**

Connect the feed-terminal **A**, Fig. 86, directly to the regular 110-volt street current. (It matters not whether it is alternating or direct.)

See that condenser-switch **S**, is down, that is, "On." Cut out the mercury dip-well **E** by lifting the plunger-switch **E**.

Connect the Electric Bio-Dynamo-Chrome with the receptacle **B** after having set the switches in the Bio-Dynamo-Chrome for giving a steady light.

The Valens Metronomic Interrupter is then ready for use.

In giving Bio-Dynamo-Chromatic Therapy, I find that if the light is intermitted too rapidly the VR does not have time to act. By making these interruptions according to Mode B, the intermittence is just right.



Interruptions according to Mode C can be used, but according to Mode B is better.

**Caution:** In using the 110-volt current directly thru Valens Metronomic Interrupter, be sure that the patient cords are disconnected from the binding posts C, C.

## CLINICAL REPORTS — PULSOIDAL CURRENT — MODE A

Case I. Mrs A. 38 years of age. Lower half of uterus amputated about a year ago, after which she developed a goiter with tachycardia. When she came to my office about six months after the operation, her pulse was very soft and going at the rate of 120 to 130 a minute. I let her rest in a quiet room for about half an hour, and took the pulse again. Found it was 120 to 125.

To metal electrodes I attached the bifurcated cord and she grasped these in her hands (Fig. 91). The other pole was placed to a tongue depressor (Fig. 92). Strong traction was put on the tongue and a gentle current given, the Interrupter being set at 110. After three minutes the pulse was counted and it was 110. I then set the speed of the Interrupter at 110 and repeated the maneuver for five minutes, after which the pulse was 100.

The next day she came for treatment. The pulse was 110 and I set the Interrupter at 100 and gave treatment as before. Within five minutes the pulse was 96.

These treatments were continued one month, after which the thyroid enlargement had gone down more than one-half and the pulse has remained at 96. Right after the treatment it will be about 88.

This woman's respiration is from 18 to 20. Her general condition is greatly improved and she says she feels like "a new woman."

Case II. A man 45 years of age came into my office one evening for examination. His respiration was 18 and pulse 60. He grasped the two hand electrodes which were attached to the bifurcated cord which went to one side of the Metronomic Interrupter. The other was placed to a sponge electrode and put over the 2d and 3d cervical vertebrae. The

Interrupter was set at 72, and within ten minutes his pulse was 72.

Case III. A lady 30 years of age was sent to me for examination. I found she had incipient tuberculosis with some reflex involvement of the thyroid. She coughed a good deal in the morning, and her pulse was 130 while her respiration was about 20. I placed the two hand electrodes from the bifurcated cord in her hands and put the other electrode, which was a wet sponge, at the 2d and 3d cervical vertebrae. I gave the current as strong as she could take it with the Interrupter set at 110. Within ten minutes the pulse was 110.

I then set it at 100 and gave treatment for five minutes when the pulse was 100.

Two days after this lady came for another treatment and her pulse was 110. I placed the hand electrodes as before and put the sponge electrode over the 3d and 4th **thoracic** vertebrae, setting the Interrupter at 100. After five minutes the pulse was 115, which was 5 more than when she started the treatment. I then changed the sponge electrode to the 2d and 3d **cervical** vertebrae and within five minutes the pulse was down to 90.

The next day I gave the same treatment, placing the sponge electrode over the 6th and 7th cervical. There was no change in the pulse. I then placed it at the 2d and 3d cervical and within ten minutes the pulse was at 90.

After six treatments this lady's cough had nearly disappeared and her pulse continued at about 88 and respirations about 20.

Case IV. A lady about 40 years of age. Respiration 18 and pulse 60. I placed the hand electrodes as in previous cases and with the sponge electrode over the 2d and 3d cervical vertebrae, made interruptions at 72. Within twelve minutes her pulse was 72.

Case V. A man about 30 years of age with pulse of 60 and respiration 18. I put the hand electrodes as before stated and the sponge electrode over the 2d and 3d cervical. I set the speed of the Interrupter at what I tho't was 72. After ten minutes there was no change and I found I had the metronomic pendulum at 88 instead of 72. I changed the pendulum to 72 and within ten minutes the pulse was 70.

Case VI. A man 60 years of age. Blood pressure 220. I placed the hand electrodes as above and the other electrode was the binocular sponge electrode attached to a handle and placed over the eyes (Fig. 90). The rate of this man's pulse was about normal, according to his respiration, which was 18; so I set the speed of the Interrupter at 72. Within fifteen minutes his blood pressure was 160 and the rate of the heart was 70.

Case VII. Mrs. K. About 35 years of age. Had a baby six weeks old and came to me as she did not have enuf milk for the baby. I placed the hand electrodes as above stated and the sponge electrode between the 3d and 4th thoracic vertebrae. I made the speed of the Interrupter four times the regular respiration. Gave this treatment for ten minutes on three consecutive days, after which time her milk was doubled in quantity.

Case VIII. Mrs. G. 30 years of age. Very nervous. Rapid pulse and unsteady respiration. I put the hand electrodes as above described and the other electrode was the binocular sponge electrode over the eyes. I set the speed at four times her average respiration, which was 18, and gave the current as strong as she could stand it for ten minutes, after which time her respiration was steady and her heart-beat 72. She remarked that she had not felt so rested in ten weeks.

After giving this treatment three or four consecutive days, she reported that bromides or nothing else had ever had the quieting effect that the treatment had.

Case IX. Mrs. C. 55 years of age. Sent to me for examination and treatment. She complained of a tired feeling all the time. Had persistent constipation and said for twenty-five years her bowels had not moved without a cathartic or an enema.

On examination I found she had enteroptosis and very relaxed abdominal muscles. I prescribed a saline laxative to be taken early the next morning, after which she was to come for treatment. I placed the clay electrode over the abdomen with a ten-pound sand pad over it (Fig. 72). The other electrode was my rectal dilating electrode (Fig. 99), which I placed in the rectum while the rapid-sine current

was on. This electrode was lubricated with iodox. I used that as the patient complained of some itching about the anus. I had no trouble in pushing this electrode into the rectum altho the sphincter was extremely tight. I made the rapid-sine wave as strong as she could endure it to relax the sphincterismus and allow the electrode to enter. After the electrode was in situ I gave the Pulsoidal Current, Mode A. While giving this treatment I had the big light over her chest and as much of the abdomen as was not covered by the sand pad.

I gave this treatment daily along with oxygen vapor and intermittent ruby light. After the first six treatments she reported her bowels had moved that morning without any laxative for the first time in 25 years. She continued to come for treatments three weeks longer and reported each day that her bowels moved in the morning before coming. It is now three months since she stopped coming for treatment, and she reports that her bowels are moving every morning without any artificial aid. Her general condition is so much improved that she and her husband both say that she has not been as well before in twenty-five years.

Case X. Man 70 years of age. Respiration 15. Heart beat 72. I placed the two metal electrodes, attached to the bifurcated cord, in his hands and the sponge electrode over the 2d and 3d cervical vertebrae. The speed of the Interrupter was set at 60, which was four times that of his respiration. Within ten minutes his heart beat was 60. Altho I later set the Interrupter at 50 to see if the pulse would go down to 50, I found it would not. It would go to 60 and no lower.

Case XI. Lady 38 years of age. Respiration 16. Pulse 72. Placed the sponge electrode over the 2d and 3d cervical vertebrae and the bifurcated-cord, metal electrodes in the hands. Set the Metronomic Interrupter at 72, which was the same as her heart-beat. After ten minutes counted the pulse and it was 72. Left the electrodes as they were, set the pendulum at 64, and after four minutes counted the pulse and found it 72—no change, "because its normal rythm was already established."



## Summary of Clinical Findings

We find that energy given rhythmically four times as fast as the respiration (the physiologic rhythm) seems to set the pace for the heart rhythm and produces beneficial results that are startling.

The heart responds to the rhythm of four times that of the respiration more readily than to any other meter.

It seems that after the rate of the pulse has gotten to four times that of the respiration, it will stay there and we cannot make it more or less by changing the meter of the make and break.

If a person is tired and languid, we find their heart beat is not in proportion of four to one with the respiration. By bringing the rate of the heart to that ratio, the patient feels rested and expresses a feeling of general well-being.

To set the pace for the heart, too great a jump cannot be made between times. It must be made by steps.

We find that we can steady the heart more by putting the electrode over the 2d and 3d cervical and the other two in the hands or over the eyes than in any other way. We also find that by putting the binocular sponge electrode over the eyes, it has a more sedative effect and controls the blood pressure better than any modality that we have ever used; and we have used every modality that we know anything about. We find that the results are as permanent as by any other method. The modality is very easy to handle, and paraphernalia is not very expensive. The apparatus for carrying on this treatment can be taken to the house and given wherever there is an alternating current or, if one has a portable transformer, treatment can be given in any house where there is a direct current.

The treatment can be given while the patient is sitting in a chair or lying on a table. It does not conflict with any other treatment.

## CASE RECORD CARD

As so many have asked me to give them a sample of the **Record Card** I use when making a diagnosis, I submit herewith a copy of front and back side of a small card.

This whole record card can also be put on the "letter size cards" and the same card be used for charges, treatment record, etc. That size card, if one has a vertical filing cabinet, is the better. Small cards are liable to be lost and require more labor to keep track of them.

Date.....	Referred by.....	Sex.....
Name .....	Age.....	
OCCUPATION .....	S.M.W. NATIVITY.....	HEIGHT.....WEIGHT.....
TEMPERATURE .....	o'clock P. A.....	Respiration.....Hemoglobin.....
PULSE E. or W.....	N. or S.....	Screen .....MM. VR
B.P. E. or W.....	B.P. N. or S.....	Screen .....
PULSE Character of Right.....	Left .....	
FINGERS.....	NAILS .....	
APPEARANCE.....	Color of EYES.....	Color of HAIR.....
EYE BROWS.....	FACE .....	
PUPILS Dilated Contracted.....	Reflex of PUPILS.....	
Condition of VISCERA by Air-Column Percussion.....		
RESPIRATORY System.....		
HEART .....	ARTERIES.....	DIGESTIVE System .....
NERVOUS System .....	URINARY System .....	
Urine.....	Albumen.....	Sugar.....
S. G.....	x 2.33 x quantity.....	c. c. in 24 hrs.....
Microscope .....		gms solids (Over)
NOSE, THROAT, EAR.....		
GENERATIVE ORGANS .....		
PERSONAL HISTORY .....		
FAMILY HISTORY .....		
REMARKS .....		
DIAGNOSIS .....		
Charge.....		

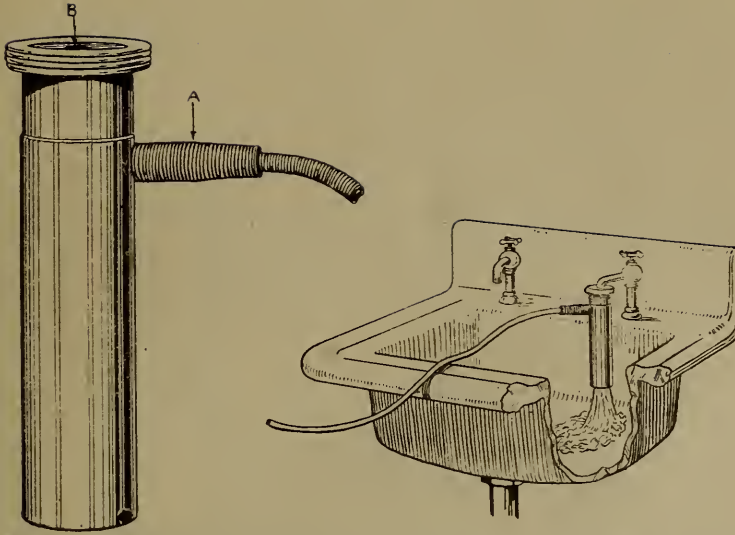


Fig. 104—Showing water-faucet attachment for giving Hyperemic Treatment. *A* is reinforcing tube to prevent long suction tube from "kinking." *B* is interchangeable bushing to fit any style faucet. This device is manufactured by Blackstone Mfg. Co., Toledo, Ohio. See pages 508 to 512.

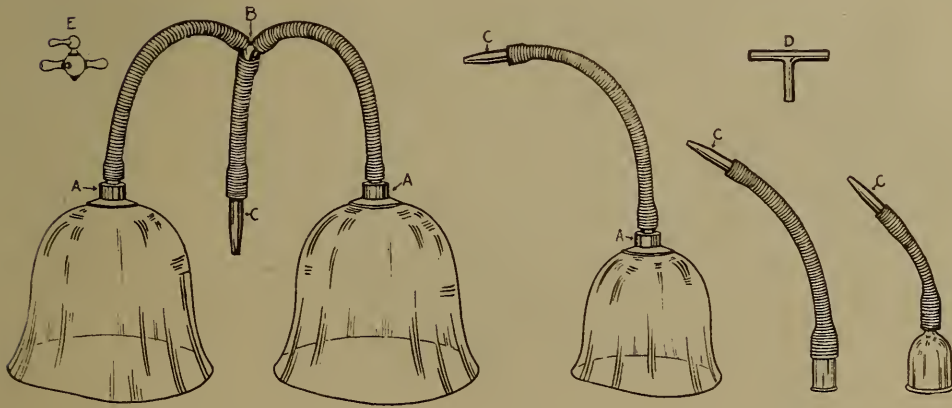


Fig. 105—Showing glass suction cups arranged to be used with the Blackstone Water-faucet Attachment. The large ones are for use on the breasts, for Bust Development or for Breast Pumping or for Mastitis. Smaller cups are for use over boils, etc. The T-Tube *D* is for attaching to tubing so two patients can be treated at one time from one Faucet attachment. The air stop-cock *E* can be cut into each Bell-Jar tubing if desired. *B* is a Y-tube. *A* is metal nipple to attach jar to tubing. *C* is metal coupling to attach cups or jars to suction tube.

See pages 508 to 512.



Fig. 106—Showing how the twin-bust jars can be used along with the Big Light for Bust development or for treating Mastitis or for Pumping the Breasts.

The lamp is about 34 inches from the patient's skin.

See pages 508 to 512.





Fig. 107—Showing how the twin-bust jars can be used while patient is sitting up. This position can be used either for Bust Development or for Pumping the Breasts.  
See pages 508 to 512.

## RADIUM PRODUCES VR

Boericke & Tafel recently gave me a bottle of their **Radium Bromide Pure**, 12x, which means a radio activity of 4,000,000 to try on reflexes. I took the lead foil off the cork and placed the bared end of the bottle against the epigastric region of a subject who was facing at right angles to the magnetic meridian. Within one-half minute the energy from the 12x radium bromide elicited a well marked VR.

Here is a fact to notice.

This radium-bromide VR was dissipated by the ruby light (A-Chromatic Screen). This would seem to show that a higher attenuation—30x or 60x would be indicated for internal treatment in tuberculosis or cancer, the VR of which is dissipated by the ruby light.

This is the most recent method of “proving” an energy for therapeutic purposes. It is the most recent method of showing the soundness of the **Law of Similars**.

## ZONE THERAPY

My Lecture Five deals entirely with Zone Therapy. We now have new data regarding this most wonderful discovery.

Since Zone Therapy is becoming so popular, some have made false claims that they "discovered" the work. Others say that the work was discovered by a Frenchman. The truth of the matter, to my best knowledge and belief, is that the system of Zone Therapy, as it is known today, was discovered by William H. FitzGerald, M. D., Hartford, Conn. The public is indebted to Edwin F. Bowers, M. D., medical critic and writer, of New York City for bringing their attention to Dr. FitzGerald's great work. This publicity was given Dr. FitzGerald's work by Dr. Bowers about four years ago, altho Dr. FitzGerald had been using it for years.

Dr. FitzGerald is generally known as a specialist in nose, throat and ear work. It was while operating on these various organs that he discovered that pressure over certain areas made his operations painless. He developed this discovery little by little and the work is now termed, Zone Therapy.

Mapping out of the body into five zones on each side of a median line is Dr. FitzGerald's system.

There have been others who have used pressures for the relief of pain but there was no system regarding its use. Pressure was made over certain nerves for deadening the pain in areas supplied by those respective nerves. As far as I can find, no one before Dr. FitzGerald ever mentioned that pressure on the little finger would make the pinna so insensible that a pin could be put thru it without any particular discomfort. Neither have I ever found any evidence that any other person used pressure over the toes as an analgesic for minor operations around the genitals; nor pressure over the thumb, first and second fingers for extracting foreign bodies from the eye without the patient even winking.

Any system that has been thrashed out by critics and pseudo-critics and proved to be reliable, is bound to have supporters who at first ridiculed the work. It seems to be human nature for a certain class of people to ridicule everything new and, whether it turns out well or ill, to say, "I told you so."

I was personally taught Zone Therapy by Dr. Fitzgerald, altho some with whom I have only a slight acquaintance claim that they taught me the system.

No doubt every physician and every layman can relate numerous instances where he has used Zone Therapy unwittingly, but that is no reason why he should say that he understood Zone Therapy before or that he discovered it. Every one knew that when a ball was thrown in the air it would come to the ground and that when an apple fell from the tree it would go to the ground, but it was Newton who began to investigate and find out **why** the apple fell to the ground instead of staying in the air. Seeing is not necessarily observing, and doing a thing without having some idea as to why it is done is not the same as doing it in a defined manner and with a certain, definite purpose.

For those who immediately say that this system of Zone Therapy is "all imagination" we have only pity. Some say that they will never acknowledge that Zone Therapy is anything but suggestion until it is proved that there are intimate relations between one extremity of the body in a given zone and another extremity of the body in the same zone. They are like the people who say they will not believe anything in physiology, chemistry or anatomy that cannot be shown.

I often ask such people if they ever tried to analyze the surface of a sidewalk, road or field over which persons had walked to see if there were any difference in the chemical constituents of one person's footsteps and another's. So far this is beyond the limits of human knowledge, yet dogs and many other animals will follow a certain track for miles, and they will do so even when blindfolded.

Caution should be used in accepting every new "fad" or theory, but I would rather be misled once in a while than to say that everything I did not understand was "imagination" or "suggestion." Because occasionally a wolf in sheep's clothing is no sign that all sheep are wolves. "Prove all things and hold fast to that which is good" is as applicable and pertinent today as it was when spoken by the old sage.

Zone Therapy has been proved of great value in the hands of intelligent and painstaking physicians, and it has proved to be of inestimable value to careful dentists.

I have personally proved the efficacy of Zone Therapy and scores of my pupils have proved it to be of great value in relieving suffering. If you do not obtain the same results as Dr. FitzGerald and many others, do not condemn the system but see whether you are using it correctly.

### **Electricity in Zone Therapy**

On page 307 is mentioned the fact that I use electricity in Zone Therapy. I am now able to show pictures of the various appliances that I have used successfully in this work.

The first electric current that I used for experimentation in Zone Therapy was the rapid-sine wave in an interrupted manner, altho the method of interruption was very crude. I used interrupting handles or disconnected intermittently the electrical connections. (Years ago I often obtained effects co-related to Zone Therapeutic effects when using the Le Duc current. This current no doubt can be used under certain conditions in Zone Therapy, but for practical work, the rapid-sine wave seems infinitely better.)

One of the first things for which I used my Metronomic Interrupter was the use of electricity in Zone Therapy. Since I have perfected this interruption of the rapid-sine wave and have developed what I have named the **Pulsoidal Current**, I use that current entirely for Zone Therapy, Mode A, as graphically illustrated in Fig. 88. This is without doubt the best current and mode for Zone Therapeutic treatment and for Zone Analgesia or Zone Anesthesia.

Mode D can be used for Zone work but so far my experience seems to show that Mode A is the better. Of course any of the Modes, A, B, C, D, E, or F can be used in Zone Therapeutic work. Each operator can judge for himself, after trying these various modes, as to which is the best for his particular case or work. That there is a marked difference in the therapeutic effect of these various modes, there is no doubt. If anyone is in doubt regarding this, let him try it out on himself. As I have said in my lectures to physicians, **Try out every modality on yourself before you try it out on a patient.** In that way you will be in a better position to judge as to its merits or demerits. At least you will know how it feels.



## The Zones

From pages 285 to 294 inclusive is given Dr. FitzGerald's method of dividing the body into zones. Figs. 110 and 111 graphically show how this is done. The upper surface of the hand and foot belong to the anterior surface of the body and the under side of the hands and feet belong to the posterior part of the body.

The body is divided into zones commencing with the inside of the great toe and the center of the nose as a median line and numbering 1, 2, 3, 4, 5, in each direction for the anterior surface of the body. For the posterior surface of the body it is divided into zones commencing with the inner side of the great toe and going to the center of the back of the head for the median line and numbering 1, 2, 3, 4, 5 in each direction. We speak of Zone 1, 2, 3, 4, and 5 respectively on the right side of the body and Zone 1, 2, 3, 4, and 5 respectively on the left side of the body. The numbers in Figs. 10 and 11 indicate five lines there marked out and these lines represent the **center** of the respective zones. For example, 1 represents Zone 1, and it passes thru the center of the great toe and the center of the thumb, while the entire great toe and thumb are in Zone 1.

Altho this method of designating the zones is rather crude, yet it is the most practical method. As I have mentioned before, there are innumerable numbers of zones but for practical purposes this method of Dr. FitzGerald's is ideal.

It will be noticed that each shoulder and axilla are in five zones.

The tongue, hard palate, naso-pharynx, oropharynx, sub-lingual region, teeth, penis, clitoris, vagina, and uterus are in **ten** zones, five on each side of the median line.

The normal viscera, with the exception of the uterus, are in the respective zones indicated on the surface of the body. For example, the liver is in five zones on the right side of the body and zones 1 and 2 and sometimes 3 on the left side of the body. (If ever in doubt regarding the exact zone any part of the body is in when giving Zone treatment, take in one zone more than necessary rather than one zone less than necessary.)

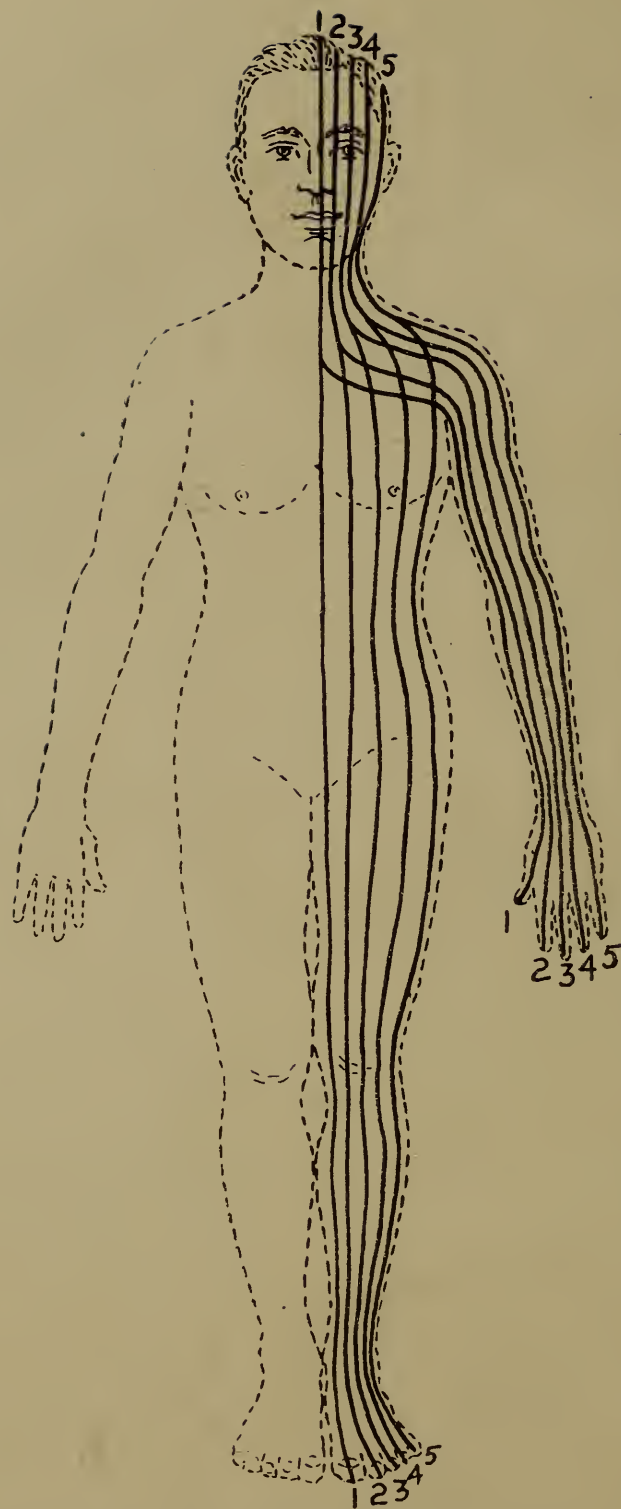


Fig. 110—Showing how the anterior part of the body is divided into Zones according to the FitzGerald system. Each line represents the *center* of the respective zone.

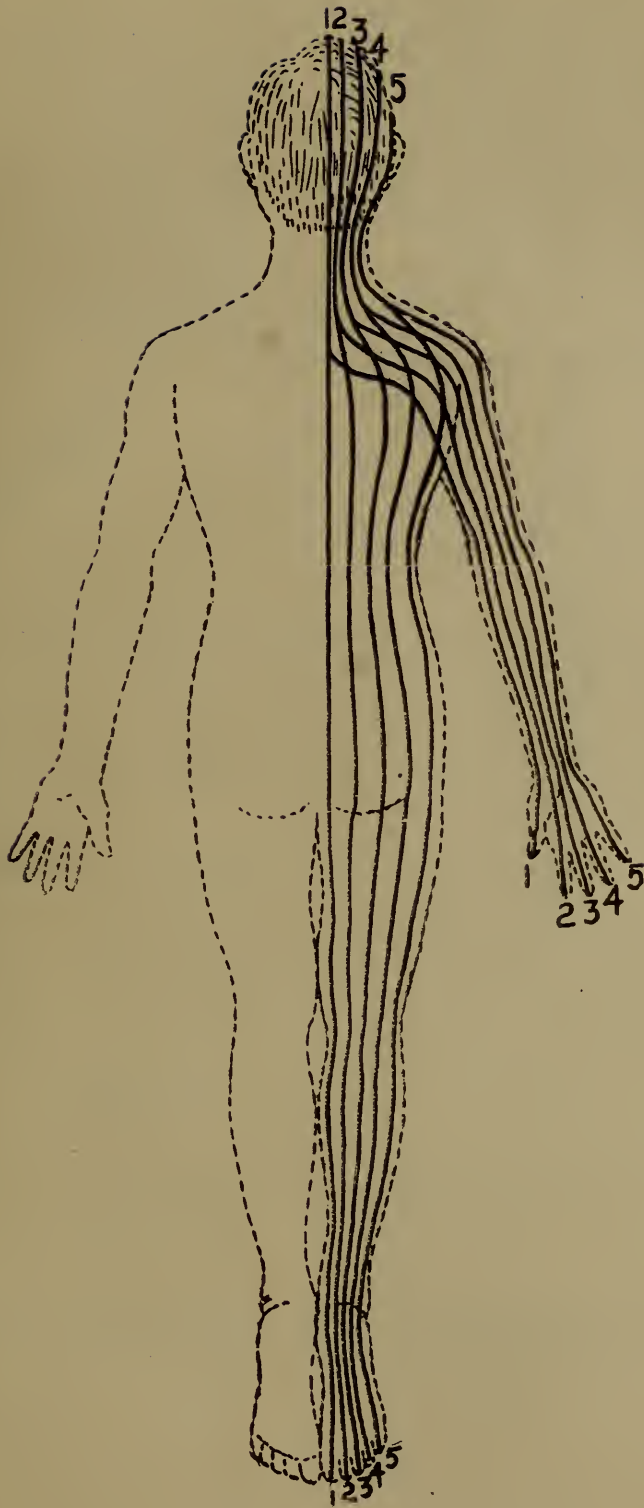


Fig. 111—Showing the posterior part of the body divided into Zones according to the FitzGerald system. Each line represents the *center* of the respective zone.

## Electrodes for Zone Therapy

Fig. 112 shows my **Uni-polar Post-nasal Electrode**. This electrode is made of special insulated wire with a bare tip. The handle is made of rubber or fiber and has in its end a hole for the attachment of the standard battery cord tip.

Fig. 91 shows this electrode in actual use. It will be noticed that the patient is holding hand electrodes in each hand. These hand electrodes are connected with a bifurcated

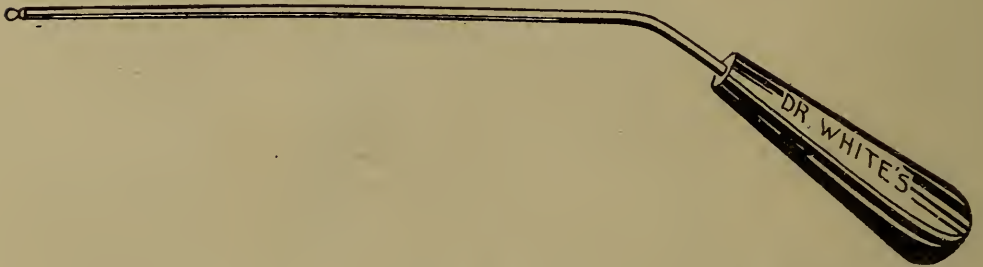


Fig. 112—Showing Dr. White's Uni-Polar Post-Nasal Electrode, manufactured by McIntosh Battery & Optical Co., Chicago.

cord to one side of the Valens Metronomic Interrupter. The other side of the instrument is connected with the Uni-polar Post-nasal Electrode.

Fig. 113 shows my **Bi-polar Post-nasal Electrode**. This electrode is never to be used except by one who is accustomed to the use of my Uni-polar Post-nasal Electrode. It is made to use with both poles together and as the bare ball tips are so near together, the stimulation is very great and it requires



Fig. 113—Showing Dr. White's Bi-Polar Post-Nasal Electrode, manufactured by McIntosh Battery & Optical Co., Chicago.

more skill to handle it than to handle the Uni-polar type. Another thing regarding this Bi-polar Electrode is that one must have some practice in inserting an electrode thru to the posterior wall of the naso-pharynx before attempting to use it. After one becomes proficient in the use of this instrument, they will obtain more profound effects than with any other electrode for Zone work, but it must be used with great caution as a very little current will go a long ways with this electrode.



Fig. 114 shows my **Tongue-Pressor Electrode**. It will be noticed that the under part of the pressor end is ridged. It will also be noticed that there is a bend in the applicator so the tongue can be readily held down without having the electrode come in contact with the teeth. This electrode has a rubber handle with a hole in its end to which can be attached the standard battery cord tip.

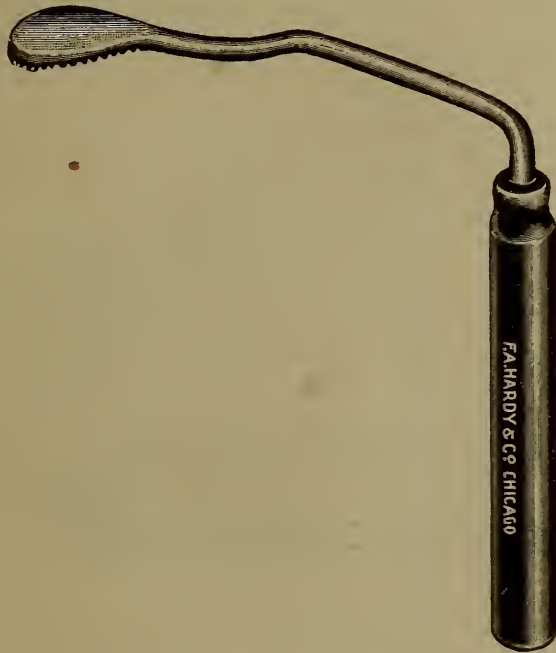


Fig. 114—Showing Dr. White's Tongue-Pressor Electrode

Fig. 92 shows this Tongue-Pressor Electrode in use. It will be noticed that one side of the Valens Metronomic Interrupter is connected with a sponge electrode applied over the 2d and 3d cervical vertebrae, said electrode being held by an x-ray tube, or a high-frequency tube, holder. The other side of the Metronomic Interrupter is attached to my Tongue-Pressor Electrode.

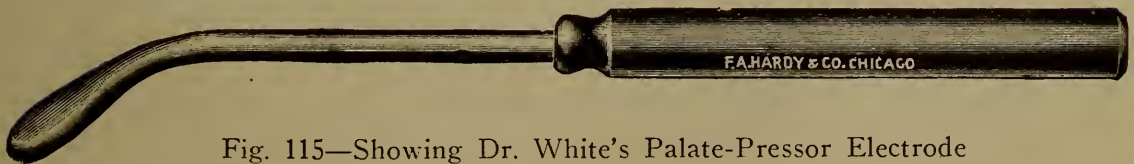


Fig. 115—Showing Dr. White's Palate-Pressor Electrode

Fig. 115 shows my **Palate-Pressor Electrode**. This electrode is made rounding at one end while at the other end is a polished rubber handle with a hole in it to which can be

attached the standard cord tip. This electrode is made to use for giving pressures on the hard palate or in the sublingual region.

Fig. 116 shows my **Comb Electrode**. The base is made of rubber or fiber and a metal tube passed thru it. Into this metal tube are inserted the metal teeth, as shown in the illustration.

Fig. 91 shows the patient holding two such electrodes in his hands. A more profound effect is obtained when using such a hand electrode than when using the ordinary metal electrode, altho the ordinary metal electrode can be used for this purpose. One of the principal uses for my Comb Electrode is for pressing the finger tips upon it. For example, one of these electrodes can be attached to one side of the Valens Metronomic Interrupter and another electrode to the other side. The patient is instructed to press the ends of the fingers which correspond to the zone to be attacked and make

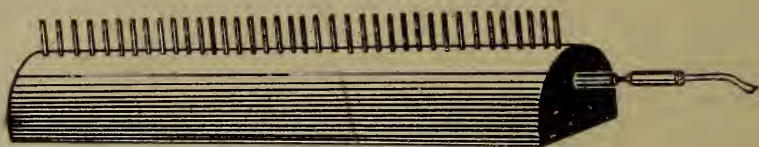


Fig. 116—Showing Dr. White's Comb Electrode, manufactured by McIntosh Battery & Optical Co., Chicago.

firm pressure. The current is then turned on to toleration. By giving this electrical treatment on the finger tips, we attack both the anterior and posterior zones at one time.

The various electrical combs that are on the market can be used for electrically combing the various zones of the body. The Manhattan Electrical Supply Co. of New York City handle such a comb under the name of "Viko." The Viko has a separable, insulated handle.

The McIntosh Battery & Optical Co. of Chicago manufacture an electrical brush electrode which can be used for electrically "combing" or brushing any zone of the body to be treated.

When using the comb or brush electrode, it is good practice to have the other electrode placed in the same zone. For example, if the right side of the body is combed or brushed, have the patient hold the other electrode in the right hand

or have it in contact with the respective zone on the right side of the body. This applies to all Zone Therapeutic treatment.

**Have the indifferent electrode in contact with the same zone of the body that is being treated.**

If treating the right side of the body, have the indifferent electrode on the right side. In many instances the bifurcated cord can be used so as to have the indifferent electrode on both sides of the body. Experience has proved this latter method to be excellent.

Fig. 103 shows my **Binocular Sponge Electrode**. This electrode has previously been explained. I have no doubt that some of the marvelous effects that the users of this electrode have with the **Pulsoidal Current** are due to the Zone Therapeutic effect of such treatment. At any rate, when this Binocular Sponge Electrode is used as shown in Fig. 90, the central nervous system is being electrically attacked in a most profound manner.

### **Time of Treatment**

Electrical Zone Therapeutic applications with electrodes as above cited and with the **Pulsoidal Current**, should not be given for more than three to five minutes in the respective zones. The reason for this is similar to that in giving the **Pulsoidal Current** over the various spinal areas. The treatment should not be given for over five minutes because the reflex or stimulation action will become exhausted. I have found in using Zone Therapy electrically that short durations of treatment are far better than the prolonged. The reason seems to be that the peculiar reflex action that is brought about by electrical stimulation becomes exhausted if too prolonged.

### **Non-Electrical Applicators for Zone Therapy**

Fig. 117 illustrates some of the various non-electrical metal applicators that I have found very useful in Zone Therapy. They are standard instruments that can be bought at nearly any surgical instrument house.

A is an ordinary intestinal clamp which I use for clamping the tongue. This I use for treating nausea where my

Tongue-Pressor Electrode cannot advantageously be use. I have the patient extend the tongue and on it I spring this clamp and let it stay in situ for five or ten minutes.

**B** is an ordinary eye-muscle retractor. This I use about the posterior pillars of the fauces as well as for retracting intermittently the soft palate.

**C** is a standard nasal probe manufactured by F. A. Hardy & Co. of Chicago. This is the style of post-nasal electrode that I have the patient use at least four times a day in their own home. This home treatment is to be auxiliary to daily office treatment by means of electricity.

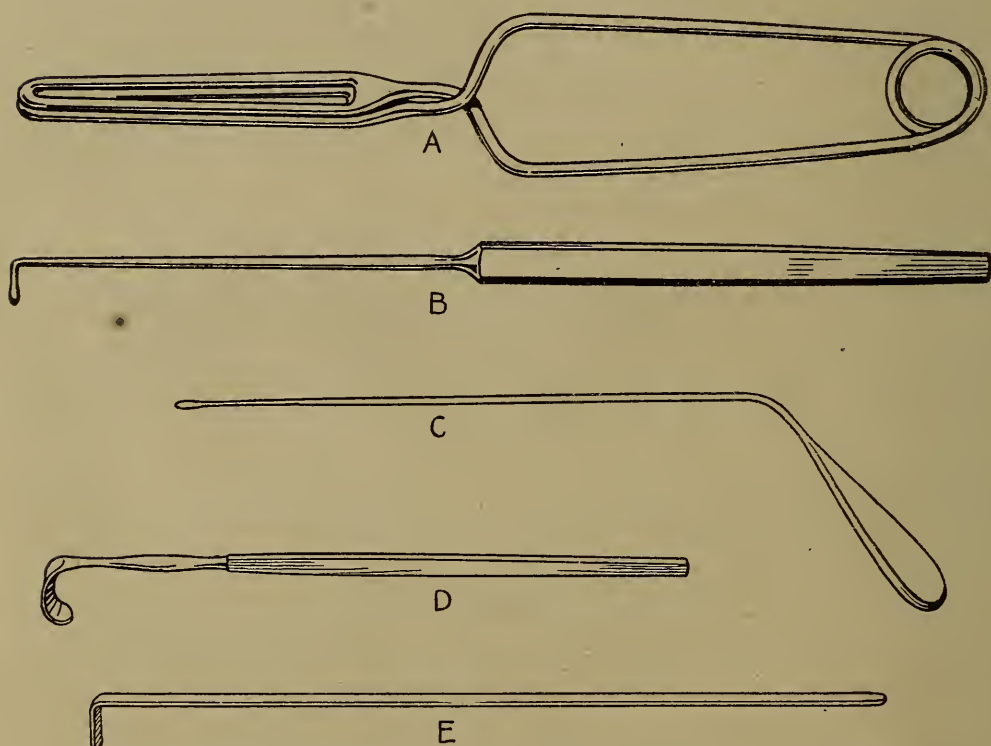


Fig. 117—Showing some of the Zone Therapeutic Applicators that have been found excellent

**D** is a standard palpebral retractor which I use for intermittently retracting the soft palate, especially in the region of the fossa of Rosenmüller.

**E** is a specially made flat applicator bent up at one end. This flat, angular applicator is manufactured by F. A. Hardy & Co. of Chicago. This applicator is very useful in treating



children about the throat and fauces. I use it as a retractor for the soft palate and also as a **pressure applicator** for the posterior wall of the oropharynx.

In some instances it is very difficult to use a post-nasal electrode. This is especially true with children, but this flat, angular electrode can be used by turning the short angular part upward thru the mouth and still attack the lower part of the posterior wall of the naso-pharynx, as well as attacking the posterior wall of the oropharynx.

Retracting applicator **B** can be used electrically by insulating the metal with a rubber tube, boring a hole in the end of the handle and inserting an ordinary battery cord tip.

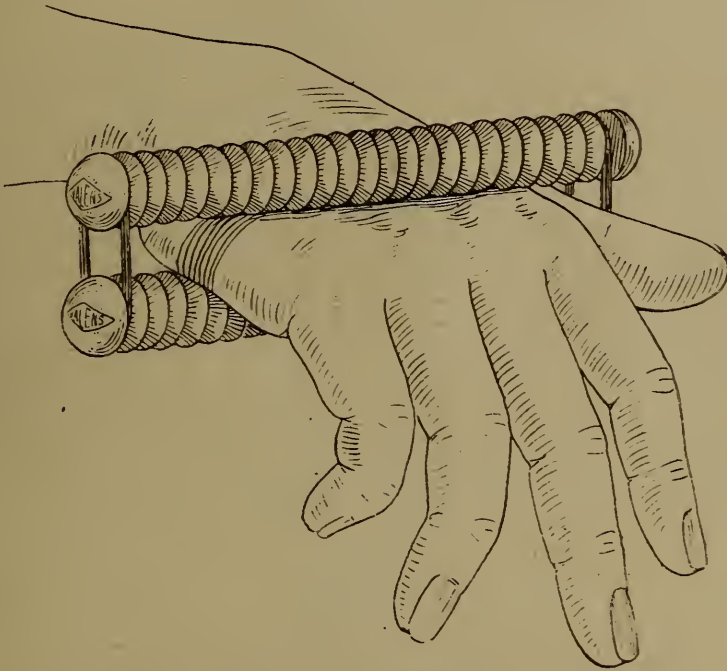


Fig. 118—Showing Valens Disc-Analgesics being used with rubber bands

Figs. 118 and 119 represent the **Valens Disc-Analgesics**. These Disc-Analgesics are made of bone-dry hard wood and are so turned that the edges of the discs are very sharp. Being made of wood, they will not cut into the skin as they would if made of metal.

Fig. 118 shows a pair of one style of these Disc-Analgesics applied to the hand and pressure exerted by means of a rubber band at each end of the applicators. These rubber

bands can give as much lateral pressure as is desired by placing the rubber band close to the hand and carrying it over toward the center. In that way one pair of Disc-Analgesics will attack all the zones of the body on that side of the median line. It is this form of Zone Analgesics that I advise for obstetrical use, and the testimonials that I am receiving from my pupils are that they are making good. Some of the testimonials at the end of this chapter speak for themselves.

Fig. 119 is the **Valens Rope-Disc-Analgesic**. It is made larger than the Elastic Pressure Disc-Analgesics, but in other ways is made the same. A hole is bored thru the center of



Fig. 119—Showing Valens Rope-Disc Analgesic

the applicator and in it is solidly cemented a small sized braided rope. This Disc-Analgesic I devised for obstetrical work as well as for other Zone work. For obstetrical work an extension rope is to be fastened to this short rope and fastened over the foot of the bed. The Elastic Pressure-Disc-Analgesics are placed over the feet and the patient grasps the Rope Disc-Analgesics firmly and makes traction with each "pain."

Another method of using these Rope Disc-Analgesics is to have a patient with sciatica stand on one or two at a time and pull upward on the rope with the hands.

Another method is to attach a coil spring to the ceiling and extend a rope down to this rope loop and have the patient make pressure with his stockinged feet on these discs. In some offices I have noticed that they have these arranged with springs in a very ingenious manner and give many forms of Zone treatments with them.

These Disc-Analgesics can be very advantageously used for home treatments auxiliary to office treatments.

### Other Applicators

**Rubber bands** about two inches long and one-eighth of an inch wide are of great service for exerting pressure over the fingers or toes.

The ordinary **wooden spring clothespins** are also of great value for using on the ends of the fingers for analgesic or anesthetic purposes.

The ordinary **aluminum comb**, such as can be carried in the pocket, or the large size, is of great benefit for home, or non-electrical office, treatments.

(The points of selection for "working" over the fingers are either on the end or around the middle joint.)

## CLINICAL REPORTS

### Case I.

The following was reported by J. H. East, M. D., Denver, Colo., under date of March 25, 1916:

"This patient gave birth to a child three years ago and had a very serious and difficult labor. The last confinement was Jan. 6, 1916. When I arrived the patient was in great pain, but within less than fifteen minutes the labor pains were normal and the patient ceased to make any outcry. Birth of child came on wonderfully rapid and seemingly without much pain to the patient. The nurse who had charge of the case had seen many confinements but said that this was the best she had ever witnessed.

"I think this patient with the old methods would have had a very serious delivery. The application I made was putting elastic bands to the toes and then putting a hard piece of wood for the patient to press her feet on. For her hands I used a knotted sheet large enuf for her to clinch tightly. (I used these crude things, as I had nothing better at hand.)"

## Case II.

The following are reports of cases by J. F. Roemer M. D., Waukegan, Ill., under date of July 31, 1916:

"A case of tri-facial neuralgia of more than two years' standing. Nothing had relieved permanently. The patient had been advised to have the nerve cut. When I returned from Detroit, after taking Dr. White's course there, I found he had been unable to speak or eat for five days, so severe was the pain, which radiated over the entire left side of the face, extending to the lower jaw, the upper jaw and up into the left eye. The pain was of a sudden, sharp, piercing nature. I applied rubber bands on the distal joint of the thumb and forefinger of the left hand, and in less than ten minutes he was talking and laughing, and we had quite a visit. Nothing was said to him about the pain or what the rubber bands were applied for. I told him to apply them every half hour if the pain continued and as the pain grew less to lengthen the interval of application. I saw him yesterday and he laughingly said, 'Oh, I apply them now once a day because I do not want to get out of the habit and I am afraid I might forget.' I asked him if he had any pain, and he replied, 'Once in a while a slight reminder.' He is enjoying life better than he has for years, thanks to 'those fool rubber bands,' as his daughter called them. In fact the remark she made when I applied these to her father's fingers was, 'What fool idea is that?' "

## Case III.

"A young, traveling man came into my office with an inflamed face. He said his teeth were sore and he could not eat, and he could hardly drink as his teeth hurt him so. He



could not close his teeth together. A dentist looked them over but said he could do nothing, and the patient was reluctant to have me even examine them.

"I found sore spots on the inside of the thumb and first finger and made pressures on them with a comb. About five or six minutes after I got him to talking about his business and in about ten minutes I asked him how his teeth were. He closed his mouth firmly and said, 'Well, they are still a little sore but do not hurt at all. What did you do?' I showed him how to apply the rubber bands in order to make the pressure, and he reported the next day that he had enjoyed a good night's rest, due to the relief I had given him. I saw him the following day and he said his teeth were not sore at all. A more thankful and grateful patient I have rarely seen, thanks to the FitzGerald idea so splendidly given to us at Detroit by Dr. White."

#### Case IV.

The following is an extract from a letter received from R. H. T. Nesbitt M. D., Waukegan, Ill., dated July 25, 1916:

"About Zone Therapy. My work is not classical. I do not use it as much as I should. I forget and use older methods. However, when I do use it I **always** have success in relieving pain anywhere, in most cases permanently, and when repeated often enuf the patient is **cured**. I do not refer to desperate, chronic or malignant cases. In lancing abscesses no other anesthetic is required. Severest headaches and migraine yield almost instantly.

"In obsetrics I have almost completely discarded chloroform at the close of the second stage, where I used to almost always use it. In the first stage, Zone Therapy relieves the nagging pains without retarding, but rather promoting dilation. In the second stage delivery is hastened. Women seem so quiet and easy one would think 'nothing was doing' until on examination, you are surprised to see what has been accomplished. For this work I use a serrated strip of aluminum 1-16 inch thick imbedded in a piece of wood of convenient size, or else I use a seven-inch aluminum comb, pressing the teeth against the inner part of the sole of the foot or near the ball, alternating from one foot to the other. When

I have an assistant both feet are manipulated at a time and that aids very materially. I exert as much pressure as the patient can bear without pain. When I have an assistant well trained, I am going to try Zone Therapy for instrumental delivery.

"In acute and chronic appendicitis, pressure on the right side of the second lumbar vertebra quickly relieves the pain and reduces the inflammation."

### Case V.

The following is a report received from J. H. East M. D., Denver, Colo., under date of August 19, 1916:

"I want to relate a case I had last Monday night. I was called to see a primipara, who had been in a labor six hours, and on examination found that the cervix was dilated to about the size of a dime, rigid, and the waters had passed away the morning before. Patient worn out by constant nagging pains and had no nourishment during that time. I put rubber bands on the wooden disc pressure devices that I got of you, and applied these devices over the tarsal metatarsal joints of both feet. I told her I wanted her to lie down and go to sleep. In a few moments she was snoring and rested thirty minutes. Awakened and had a pain and then dozed off. I told her this would be her case for four or five hours and that I, myself, must have some rest. I laid down and was awakened by the nurse in two hours. She said the pains were becoming quite hard. I found the os dilated and head protruding well down thru the os. I then massaged the perineal muscles as they were very tense, which seemed to relieve her of the pains in the perineal region and also the pains in back. She rested between her pains usually, and in less than an hour the child was born. Perineum left in good normal condition, the placenta passed away with little or no trouble. As there seemed to be a great deal of hemorrhage, I use Credé's method for ten or fifteen minutes, when everything seem to be O. K. After looking child over and satisfying myself that the patient was all right, I left. I saw the mother and child the following morning and found both doing nicely. Having no after effects, she thanked me for not giving any chloroform or nar-

cotics, as she knew that she could not feel so well if she had been under their influence. I surely have to thank you for bringing this method to my attention."

#### Case VI.

The following is an extract from a letter from Charles C. Reid M. D., Denver, Colo., under date of Sept. 6, 1916:

"Since receiving instruction from you as to the use of Zone Therapy, I have had an opportunity to test it under many conditions. I have by its use relieved many headaches, frontal, top, back and side; some coughs; dysmenorrhea; eye pain; ovarian neuralgia; and pains in the back.

"I also had a case of obstetrics which was under the influence of Zone Therapy for four and one-half hours. Altho the work was new to me and my technic was necessarily crude, yet this child was delivered without chloroform or ether and without any sharp pain at any time. With the perfecting of the technic, I am confident that 'twilight sleep' will be greatly surpassed, because practically painless childbirth can be accomplished with all the dangers of 'twilight sleep' eliminated.

"My test case in this inhibition method was not an easy one. The mother was twenty years of age, primipara, medium size. The baby was very large (weighing ten pounds), its head being too large for the pelvic outlet without much overlapping of bones at the fontanelles and sutures. I was called at midnight and was there about 12:30 a. m. Getting scrubbed up, I made an examination to see the progress. Dilation had begun, pains were coming every eight to ten minutes, and everything seemed normal. She was beginning to cry out a little with the severity of the pains. I gave her some rough, round pieces of wood about six inches long to grip in her hands. They were about the size of a broomstick with carved ridges around them. Some similar sticks were put on her feet for her to press against.

"She labored four hours, having strong contractions, gradually getting more frequent. The inhibition on her hands and feet did not seem in any way to interfere with normal uterine contractions. I frequently asked her if she had any acute pain during her hardest contractions. She would bear

down with all her might, but at no time was she bothered with acute pain. She would invariably answer that she was suffering no pain with the contractions.

"When the baby's head reached the pelvis, it stuck and for about sixty minutes with all her work and strong contractions no progress was made. She had exhausted her strength against what seemed a practical impossibility. Now came the most crucial test for Zone Therapy. It had to be an instrumental delivery or at least assisted by instruments. I have had many forceps deliveries, but always used chloroform, except at this time, before introducing the instruments. After the instruments were boiled and everything arranged, while the ridged wooden cylinders were still clamped on her feet, the right instrument was introduced with little complaint of pain. Then the top one was placed and the two readily locked. There was no crying out nor complaint of acute pain even when traction was made to assist contractions. A very slow delivery of the head was made without laceration. At once the cord was discovered to be twice around the child's neck and the head was blue. The cord was removed quickly and a rapid delivery of the shoulders was made. It took about five minutes to get the child to breathing with artificial respiration and alternate sprinkling of hot and cold water.

"If this woman had been doped with morphin and scopalamin or any other opiate, it can easily be imagined that another 'blue baby' and another little coffin would have been added to the long list of 'twilight sleep.'

"A few minutes after the delivery of the afterbirth, the woman said she was feeling fine. She complained of no after sickness or soreness, had no abnormal temperature at any time and no extreme exhaustion. When the shoulders of the child came thru there was a small laceration which was immediately repaired."

### Case VII.

The following cases that have come under my personal care are interesting:

A man about 45 years of age, who had been suffering for at least six months with coccyalgia and had tried all kinds



of treatments including the most improved method of spinal manipulation, came to me for treatment. I tried the ordinary electrical methods and also manipulation of the coccyx, but all to no avail. Nothing would relieve the pain except radiations from the big lamp. Strange to say, I did not think of Zone Therapy until I had been treating this patient for about a week. Then it occurred to me that rubber bands on the fingers might be efficacious. I gave the patient ten rubber bands about one-eighth of an inch wide and two inches long, telling him to wind them around his fingers every two hours and leave them on until the fingers became blue and then remove them.

He followed out my instructions and within three days the coccyalgic pain had subsided and within three weeks he reported himself as well.

### Case VIII.

On one of my trips I noticed a conductor stooping as if in pain. As he came to my seat I asked him what the trouble was and he told me he had had lumbago for six weeks and had been confined to the hospital for three weeks when he had to leave owing to rush orders from the division superintendent. He said every move he made hurt him as if he were being tortured in a vise.

I asked him to come out to the lavatory as soon as he could and I would talk with him about it. When he came in I looked at his finger nails and told him I made a specialty of "studying fingers." I put rubber bands around his thumbs and fingers of both hands. He looked bewildered and acted as if he thought I needed a "keeper." I talked with him about various subjects, not mentioning what I was trying to do or what I expected, thereby eliminating suggestion. Within ten minutes the train suddenly stopped and the conductor got up hastily and went out. When he returned he looked at me with a curious expression and inquired if I were a doctor. I made some evasive answer and he remarked that he thought when I put the bands on his fingers that I was "nutty" but "those fool bands" or something else had relieved

him of all pain in his back for the first time in six weeks. I took the bands off his fingers and when I saw him the next night he said his back was absolutely well.

#### **Case IX.**

At one of my recent lectures in Chicago a doctor came to me complaining of headache. He said he had had it for two or three days and wanted to know if I could do anything for it. I asked him where the pain was located and he said it was over the central portion of the forehead, reaching down to about the middle of the eyes. I took six spring clothespins and clamped one over each thumb and one over each of the first and second fingers, clamping them right over the nails. I told him if they hurt to not mind but leave them there until I returned in about five minutes. I was delayed and did not see him for about ten minutes when I removed them. He said that pressure treatment relieved him almost at once and said "The funny part of it is that I have no pain in my back that I have had for several days."

#### **Case X.**

Another doctor presented himself to me, asking if I could suggest anything for pain in his shoulder. He said the pain had been growing worse until his shoulder was so disabled that he could not put his hand in his pocket. I clamped spring clothespins on the fingers of the right hand, which was the side affected, and left them there for about ten minutes, after which I removed them and told him to put his hand in his pocket. To his surprise, he could do so. I then asked him to swing his arm up over his head and around as if swinging dumb bells. He did so and said there was only a little pain.

I did not see him again so do not know whether the cure were permanent. I told him to use rubber bands or clothespins on his fingers every two hours until all pain and soreness had left his shoulder.

From the symptoms I diagnosed the case as one of peripheral nerve pressure caused by contraction of some of the shoulder muscles. This could have been caused either by a sudden blast of cold air blowing over the warm skin, or from some strain that had brought about temporary stasis.

## Case XI.

When I was holding a lecture course in Kansas City in Sept., 1916, Dr. A. E. Walker of Anthony, Kansas, brought in a patient who said he had coughed every day for the past twelve years. As Dr. Walker was acquainted with this man from the beginning of his trouble and had formerly been his physician, I took his report of the case as being true. The man was a farmer about 40 years of age of good habits. Twelve years ago he had an attack of bronchitis from which he had never recovered. He coughed from the time he arose in the morning until he retired at night but when warm in bed he did not cough. He had been told by many physicians that he had tuberculosis.

I examined the man Bio-Dynamo-Chromatically and found he had no tuberculosis. In testing his pulse I found it was running at the rate of 110 to 120. His respiration was 18. His throat was very much inflamed. His conjunctiva was congested. His eyes did not protrude and he was not nervous. He had a sunny disposition in spite of his cough. His blood pressure was above normal. His right pulse had a greater tension than the left, modified as he turned from facing east or west to north or south. Looking straight at this man's neck, no enlargement of the thyroid could be seen; but looking at it laterally, an enlargement of the thyroid could be seen. Therefore my diagnosis was habit cough and reflex hyperthyroidism.

I inserted a post-nasal probe thru his nose to the posterior wall of the pharynx and asked him to place his finger where he felt it. He placed his finger at the interclavicular notch. I exerted intermittent pressure for about five minutes. He did not cough more than twice the rest of that day. He reported the next morning for treatment and I gave him the Pulsoidal Current over the 2d and 3d cervical vertebrae, and probe treatment over the posterior wall of the pharynx as on the previous day. His pulse came down to 80.

I told his physician to follow out this line of treatment and for home treatments to have him place rubber bands around his thumb and first two fingers four times a day, leaving them on until the finger tips were blue. I have recently received a report from Dr. Walker stating that this man is

"perfectly well." At least his cough has practically subsided and his condition in every way is greatly improved.

### Note

The following should have gone in this book when speaking of the diagnosis of tuberculosis and specific urethritis, but it was inadvertently omitted.

One of my pupils, Dr. R. E. Wright of Loveland, Colo., has sent me a complete report of a diagnosis by means of the Bio-Dynamo-Chromatic method which shows the exactness of the test. A young man, hearing that Dr. Wright was using this method of diagnosis, went to him to see if he were "all right in every way." Dr. Wright tested him and found that he gave a "violet" MM VR (D-MM VR). He told the young man what this signified and the young man told him that he had no symptoms of anything of the kind, but two days before he was at Denver and fell in with "company" that he wished he had not been with, and it had worried him. Six days after this young man came to Dr. Wright's office with a very pronounced case of acute gonorrhea which did not need any special method of diagnosis as the symptoms were "classical."

From my experience with such cases, had Dr. Wright commenced treating by means of the powerful radiant light, oxygen vapor and intermittent-violet light at once, the "classical" symptoms would never have appeared.

Some months ago another of my pupils, Dr. F. L. Class of Huron, S. Dakota, reported to my Omaha class that he had tested patients who gave a normal MM VR. He then scarified the arm, rubbed on 25% old tuberculin (O.T.) and twenty-four hours after the same patient gave a ruby MM VR (A-MM VR). I have checked up this work and found that Dr. Class is correct, and that tuberculin given in this manner can be detected by my Bio-Dynamo-Chromatic method of diagnosis twenty-four hours after the scarification and inoculation.



## GENERAL INFORMATION

VALENS is my trademarked name and it is **registered** in the U. S. Patent Office. Any device bearing the name **Valens** is devised by me and manufactured under my supervision.

Some people seem to think that a physician should not manufacture or sell devices. A new system requires special apparatus, and as this new work has progressed I have been obliged to invent apparatus for developing it. I now have the devices manufactured under my own supervision and sell them simply as an accommodation to those who have taken up this new work, as the amount realized from sales can never reimburse me for the money spent for experimental models, dies, etc., to say nothing of the vast amount of time and energy expended. My sole object is to make the system perfect.

I have taken out patents on my various inventions, not to keep the general practitioner from using them, but to protect myself and the users of my systems.

I have made the prices of my various productions as low as possible to enable doctors of limited means to embrace my systems of Physical Therapeutics and Bio-Dynamo-Chromatic Diagnosis.

When mentioning any special device, I have endeavored to give the name and address of the manufacturer so they can be ordered directly from headquarters. I do not attempt to fill orders for anything except **Valens** goods, and do not take orders for any books except my own publications.

**Terms:.. I keep no books for merchandise, so must ask all to send cash with order. Goods will be sent as promptly as possible.** I do not carry a large stock unless it is necessary.

## PRICE LIST OF VALENS SPECIALTIES

(These prices are liable to change at any time)

**Valens Bio-Dynamo-Chrome (B-D-C) without screens**

Fig. 15) .....\$18.00

**Valens Chromatic Screens (Figs. 25 and 26).**

### Set Number 1

A .....	\$1.50
A <sup>4</sup> .....	1.00
A <sup>2</sup> .....	1.00
B .....	1.50
C .....	3.00
D .....	3.00
E .....	2.00
F .....	3.00
G .....	2.00
H .....	3.00
X .....	2.00
☪ .....	.50
☸ .....	.50

Set Number 1, Total..... 24.00

### Set Number 2

A <sup>3</sup> .....	\$1.00
A <sup>1</sup> .....	1.00
<del>A</del> <sup>2</sup> .....	3.00

Set Number 2, Total..... 5.00

**Note**—For the beginner, **Set Number 1, Chromatic Screens**, will answer. **Set Number 2** is for use after good technic has been acquired.

### Combination Offer

Valens B-D-C with Set Number 1 Chromatic Screens ..... 35.00

(This makes the B-D-C less than cost. No discount on B-D-C except as above listed.)

### Special Chromatic Screens

If a certain color or combination of colors is found that will elicit the MM VR, and samples of the colors are sent to me, I will give estimate on **Special Screens** to match the vibrations of the samples submitted. The prices range from \$3.00 to \$10.00 each.

**Pedestal Pin** and screw complete (Fig. 17) when sent with express order..... .50

**Special Thermic-Interrupter Socket** (to replace that in B-D-C when it is worn out)..... 2.50

### Valens Foot Switch (Fig. 14.)

When sent with B-D-C, or with order for Chromatic Screens amounting to at least \$25.00..... 7.00

(These Foot Switches, when sold alone, cannot be sold for less than \$10.00 as the cost is so great. They can be "home-made" as cheaply as I can get them by the hundred.)

### Valens Pedestal

These can be made and sent to any address, but they can be made by your cabinet maker from diagrams shown in Figs. 19 and 20 as cheaply as I can have them made. They should not cost you over \$12.00 when "home-made." I could not furnish them, crated, for less than \$15.00 each along with other goods.

### Valens Turntable

These can be "home-made" as cheaply as I can have them made. Figs. 12, 13, 42 show two styles. The plain style should not cost over \$7.00 and the elaborate style not over \$15.00 each.

**Valens Metronomic Interrupter, Style D** (Fig. 86)..... 35.00

This is an elegant outfit and well worth \$50.00. It is made of birch, mahogany-piano finish. All parts are made of the best material. The clock work is made by "Seth Thomas," the famous Connecticut clock factory. This device is being protected by domestic and foreign patents in order to protect the users of the **Pulsoidal Current**.

<b>Valens Practice Drum</b> (Fig. 3).....	10.00
<b>Valens Energy Conductor</b> (Fig. 2).....	8.00
(Pole Differentiating)	
<b>Valens Organotonometer Set</b> (Fig. 36).....	6.00
(Set includes two tambours, one with glass legs and one without, and one hammer)	
<b>Valens Vagotonometer Set</b> (Fig. 37).....	2.00
<b>Valens Densitonometer Set</b> (Fig. 39).....	2.50
<b>Valens Super-Densitonometer and Hammer</b> (Fig. 41)....	3.50
<b>Valens Organ Pipes</b> (Figs. 4 and 43)	
Prices on application	
<b>Valens Static Grounder</b> (Fig. 11).....	1.50
<b>Valens Solenoid</b> (Fig. 50)	
Price on application	
<b>Valens Rectal Dilator and Electrode</b> (Fig. 99).....	2.50
<b>Valens Skirt Supporter</b> (Fig. 10)	
Can be home-made as well as I can make them	
<b>Valens-Disc Analgesics</b> (in sets of 4, Fig. 118, and sets of 2, Fig. 119).....	5.00
<b>Valens Abdominal Support</b> (Figs. 68, 69, 70)	
Price to Physicians, each, \$4.00, per dozen, \$45.00.	
Price to Patients, each .....	6.00
This Abdominal Support is well worth \$10.00 each. Nothing made can compare with it. Many substitutes at higher and lower prices are already on the market.	
<b>Valens Magnetic Concussor</b> (Fig. 85).....	6.00
For its purpose, nothing can compete with it. It is an elegant outfit and looks like a <b>physician's in-</b> <b>strument</b> and not a child's plaything.	
<b>Valens Elaborate Compass</b> (Fig. 54)	
Price on application	
<b>Valens Sex Detector</b> (Fig. 9)	
This can be made at home by using a heavy aluminum thimble in end and having the wood bone- dry and highly polished with shellac and oil over a spar varnish. Price of kind I use on application.	



**Notice:** The little devices are sent prepaid but the others are sent by express collect. The 60-watt tungsten lamp in the B-D-C I cannot warrant to go thru safely. About one out of ten are received broken. They can be replaced at any Electric Light Company's office. **These lamps are 110 volt.** If a 220 volt current is used, the current must be passed thru a resistance coil before going to the B-D-C lamp or its switches or thermic interrupter.

My LECTURE COURSE TO PHYSICIANS  
Fifth Edition  
with  
The Illustrated Supplement  
Sixth Edition

Bound in One Volume, Full Leather, Gold Stamped. Sent post paid to pupils for \$6.00. When ordering, state when and where you took my course.

GEORGE STARR WHITE M. D.,  
327 South Alvarado st., Los Angeles, Calif.



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