

Program for Our Monthly Physiotherapeutic Meeting

Monday, December 14, 1925

A. L. YOCOM, JR., M. D., Chariton, Iowa.
"Electrocoagulation of Malignancies" 11:00 to 12:00 A. M.

G. W. FUNCK, M. D., Chicago, Ill.
"The Treatment of Genitourinary Diseases with
Diathermy" 1:30 to 2:30 P. M.

MR. E. W. ERIKSON, of Chicago, will discuss the practical applica-
tion and usages of Quartz Ultra-Violet Light, 10:00 to 11:00 A. M.
and 2:30 to 3:30 P. M.

How to Get Here:

DRIVING—Follow Washington
Blvd. to Oakley Blvd., north
on Oakley to Wabansia Ave.
and one block west, or

BY ELEVATED—Take the
Humboldt Park "L" to West-
ern Avenue Station, walk one
block north to Wabansia Ave-
nue and a short block east to
Claremont, or

BY SURFACE CAR—Western
Avenue to Wabansia Avenue,
and one block east to Clare-
mont.

of Ultra-Violet by an expert who can explain the quartz lamp
from the practical end.

H. G. FISCHER & CO., Inc. Phone Armitage 0323
Physiotherapy Headquarters
2335 Wabansia Auenue, Chicago

FISCHER'S MAGAZINE



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NOVEMBER, 1925

NO PLEASURE IS
COMPARABLE TO
THE STANDING UPON
THE VANTAGE GROUND
OF TRUTH.

—FRANCIS BACON

Fischer's Magazine

*Devoted to the advancement of the Science of Electro-Physio-
Therapy and to the interests of those earnest and enlightened
medical men who are practicing it.*

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Vol. IV.

NOVEMBER, 1925

No. 11

The Convention

From Monday, October 12th, to Friday, October 16th, the Mezzanine floor of the Drake Hotel at Chicago was the scene of the most enthusiastic series of clinics and discussions it has been our privilege to witness. Down in the auditorium on the first floor, meanwhile, speaker succeeded speaker in a program that makes the Fourth Annual Physiotherapeutic Convention an epoch in the history of Physiotherapy.

Many improvements and refinements were apparent in the conduct of this year's Convention. Clinics were more conveniently arranged; every physician was given an opportunity to study intensively every subject in which he was interested. Lectures were limited to the scheduled time; but discussions on the questions raised were carried on to the fullest extent, and many a physician went back home with questions answered that have been accumulating throughout his last year of practise.

In attendance, the Convention outranks any similar gathering of physicians interested in Physiotherapy—even the tremendous gathering at the Third Annual Convention at Logan Square, last year. Physicians from forty-one states were there,



Elkin P. Cumberbatch, M. D.
of London, England

as well as representatives from Canada and the British Isles. And in this gathering of hundreds upon hundreds of earnest men—and women—there was evident an enthusiasm and a sure purpose that augurs well for the future of this branch of medical science.

Outside interest in the Convention was very keen. The press gave to the public a series of interesting reports on the various sessions. Station WGN, the Chicago Tribune radio station on the Drake Hotel, broadcast one of the afternoon lectures.

And as for the physicians who officiated at lectures and clinics, too much cannot be said of their untiring enthusiasm and their unselfish sacrifice of time and effort on behalf of their fellow physicians who came to the convention seeking knowledge of physiotherapy. The thanks of the Convention are due, in overflowing measure, to these men:

- | | |
|------------------------------|------------------------------|
| Miles J. Breuer, M. D. | D. Frank Knotts, M. D. |
| Leslie Clough, M. D. | Disraeli W. Kobak, M. D. |
| M. H. Cottle, M. D. | Gustav Kolischer, M. D. |
| *Elkin P. Cumberbatch, M. D. | Wm. A. Lurie, M. D. |
| *W. B. Chapman, M. D. | G. Betton Massey, M. D. |
| Leo C. Donnelly, M. D. | Frederick H. Morse, M. D. |
| *Emile C. DuVal, M. D. | L. M. Otis, M. D. |
| Raymond F. Elmer, M. D. | Roswell T. Pettit, M. D. |
| *J. C. Elsom, M. D. | *Curran Pope, M. D. |
| F. W. Ewerhardt, M. D. | *T. Howard Plank, M. D. |
| Geo. W. Funck, M. D. | Israel L. Sherry, M. D. |
| J. U. Giesy, M. D. | Chas. E. Stewart, M. D. |
| Dean W. Harman, M. D. | Harry M. Thometz, M. D. |
| *E. C. Henry, M. D. | Albert F. Tyler, M. D. |
| *A. R. Hollender, M. D. | Frank H. Walke, M. D. |
| *Wm. E. Howell, M. D. | Clarence M. Westerman, M. D. |
| Arthur E. Joslyn, M. D. | A. L. Yocom, Jr., M. D. |

*Also officiated as chairman of one of the sessions.

Convention Pictures Now Ready

Those visitors to the Convention at the Drake Hotel, October 12th to 16th, who would like to have a copy of the group photograph reproduced on the following page, may place their orders with the Educational Department of H. G. Fischer & Company. The pictures are 11x18½, ready for mounting, and are furnished at cost price of \$1.50 each.



"Among Those Present" at the Convention

Valedictory to the Convention

By CURRAN POPE, M. D.
Pope Sanatorium, Louisville, Ky.

Ladies and Gentlemen: It now becomes my pleasant but somewhat sad duty to bid you farewell.

The beauties and the glories of the setting sun, casting its rosy and varied iridescence over hill and dale, stilling nature's activities and calling to peace and rest, is to me one of the most beautiful of nature's moods.

"The curfew tolls the knell of parting day,

The lowing herd winds slowly o'er the lea,
The plowman homeward plods his weary way
And leaves the world to darkness and to me."

To us this is the sunset of our labor. This night of soft repose we hope is but the prelude to a day of future when we may in our active workaday lives put into practice what we have learned here.

Men and women, physicians and surgeons, become better

practitioners of the healing art when they round out their lives by giving and taking of their knowledge in friendly and active contacts, even as the rough stone is rounded in the brook by constant rolling against the other pebbles.

We leave here heartened by our contacts, ready, and better prepared to do our work, imbued with the hope that some one among us will yet further push forward into that vast continent of the unknown in medicine, the illuminating and radiant light of knowledge.

The morrow! Let us be up and doing, ready for the fray, eager to catch and lift aloft that torch that may be falling from failing hands.

We have gathered together here more than 700 strong, from forty-one states of this Union, with a representation from our friends and neighbors, Canada and England. We have accomplished, I think, much. Many conventions have I attended and I know of none in which there has been presented more or better papers or communications than in this.

This meeting is ended. We have met upon the level, we will part upon the square. Take with you all the good, use it, mould it, better it, until another time when we shall meet again, *Deo volente*. And now I bid you good-by on behalf of my confreres who have labored so hard in the preparation of their work and its delivery; and on behalf of the great commercial interest that has made this meeting possible.

May the hand of time deal gently with you, may you work, love, labor, and prosper. May the grim reaper spare you, spare you for another year and another reunion. May our motto in the days to come be "Dear God, grant us the wisdom of a loving heart that with a kind tongue we may say the right thing rightly." I bid you adieu. (Applause.)

Did You Lose Your Glasses, Doctor?

During the week of the Convention, a pair of spectacles was found in the Convention rooms at the Drake Hotel. They are being held by the editor of FISCHER'S MAGAZINE, who will gladly mail them to the owner upon request.

Convention Lecture Broadcast Over WGN

At 2:40 P. M., October 16th, the lecture on Ultra-Violet Light given by T. Howard Plank, M. D., on the floor of the Convention, was put "on the air" by Station WGN, the Chi-Tribune Radio Station on the Drake Hotel. Dr. Plank said, in part:

Ultra-violet wave lengths, commonly called ultra-violet light, are the portion of the sun's rays that produce the condition known as sunburn. The commonly known light wave lengths are those which effect the retina of our eyes; above and below these colors in the spectrum, there are other wave lengths known in the scientific world as the invisible wave lengths. The first part or near ultra-violet wave lengths, we can get from the sun provided we are away from smoke and dust, both of which filter out a large portion of these frequencies. They have very little power of penetration. All clothing is opaque to them. This is why Rollier at his sanitarium in the Swiss Alps has his children play in the sunshine in breech-clouts. It is also one of the main reasons why the Indian in his wild state seldom had tuberculosis. It is also the reason why civilized people are today putting their tubercular patients out in sunlight, which means also in the fresh air. If we could all live in the open, away from cities and crowded communities, we would not be subject to this disease. Finsen of Copenhagen was the first in recent years, 1893, to take up the scientific study of the ultra-violet wave lengths. He used the carbon arc for his source of light and by its use, he was able in tubercular cases to obtain results theretofore unknown. Its use as he developed it, was too limited to attract many in the medical profession. It remained for Haereus in Germany, to find a method of using quartz, which is transparent to the ultra-violet wave lengths as they come from the sun and it is also transparent to wave lengths very much shorter. However, had it not been for the previous discovery of Peter Cooper in the United States of the mercury arc lamps, Haereus's discovery of the fusing of quartz would have been of little value. Peter Cooper used only

glass for his lamps and these are the blue-green pipe-stem lights seen in many photographic galleries. By placing the mercury in a quartz vacuum and heating it with electricity, Haereus was able to produce wave lengths as short as the transparency of the quartz, or 1860 Angstrom units. From this time on to the present, progress has been rapid.

The medical profession has been alive to the recent discoveries in the ultra-violet field and in conjunction with the various universities in the United States is rapidly determining the limits of the ultra-violet wave lengths in the care of public health and the treatment of the sick. The present determinations are that these wave lengths are beneficial in tuberculosis, rickets and tetany, or malnutrition, for water-sterilization and many of the more prominent infections. They are being used in the industries as a definite aid in the care of the injured. Clinically, there are but two methods of producing these wave lengths. First, the various carbon arcs and secondly, the mercury vapor arcs in a quartz container. Professor Steenboch of the University of Wisconsin has quite definitely determined that the benefits derived from the ultra-violet wave lengths are due to a chemical activation of substances found within the layers of the skin. He also found that this activation was much greater when the skin was radiated with the rays from the quartz mercury arcs than when radiated from the sun, even on the brightest day in June.

Theater Installs Ultra-Violet Department

The Ziegfeld Theater, at 54th Street and 6th Avenue, New York City, has set aside a whole floor for use as an ultra-violet department, according to advices just received by Fischer's Magazine. A physician from St. Bartholomew's Hospital is in charge, and treatments are given regularly to members of the cast who are in need of them. Coryza, as is well known, responds readily to quartz-light treatment in most cases; and it is reported that all such cases at the Ziegfeld are now referred to this department.

Keep Your Leyden Jars Filled

At the convention just closed at the Drake Hotel, several operators of "LO" and "FO" Diathermy Cabinets suggested that we call attention through the pages of Fischer's Magazine, to the extreme importance of having the salt and water solution in the leyden jars always up to the proper level.

It is very important that the water level always be maintained slightly above the top of the outer brass coating on the glass jars.

When in doubt, remove the caps from the four leyden jars, and, after a thorough cleaning, fill them with a saturate solution of salt water up to $\frac{1}{4}$ inch above the level of the outer brass coating. Use one-half pound table salt to each jar. The fluid should be poured into the jars to just above the top of the outer coating, and immersing the carbons will increase the level to the desired point. A film of paraffin oil on the water (about $\frac{1}{4}$ inch or so) will reduce evaporation. Should any moisture be present around the jars, dry thoroughly before using the machine.

The solution in the jars needs little attention, but it is advisable to make periodic observation to see that the level does not fall too low. Observe this every few days while the cabinet is new, and you may gradually lengthen this period from experience. Should the water level fall to or below the top of the outer brass coating, plain water should be added immediately.

If, for any reason, the solution of one jar needs replenishing, or you replace a jar, it is important that *all jars* be emptied and refilled with fresh brine as above instructed, to insure a perfect condenser balance.



Leyden Jar



Prepared
Salt No. 879

Physiotherapeutic Treatment of Chronic Gonorrhea and Its Complications

By CARLTON L. ROWELL, M. D.

Chicago, Illinois

The above title is perhaps a misnomer, because chronic gonorrhea really *is* complications. When you speak of posterior urethritis, prostatitis, vesiculitis, Cowperitis, stricture, or infection of the glands of Littre, following gonorrhea, you are really speaking of the complications of the disease.

I had occasion to do some of this work with the A. E. F. and I think that anyone who has had much experience with the old line of treatment, which consisted mostly of massage, posterior irrigations and sounds, will agree with me that it has been far from satisfactory. We realized it over there. We would treat some of these cases for five or six months and then start checking up to see if treatment could be discontinued. We would perhaps get two or three negative prostatic smears, take them off treatment for a few weeks, and then another examination would show that they were apparently right where they started.

Realizing that if gonorrhea was to be treated successfully a departure from the old line of treatment was necessary, I started using diathermy—approximately two years ago.

Diagnosis

I am not going to take up the morphology of the gonococcus, the anatomy of the parts involved, or the pathology of the disease. That can easily be learned from textbooks on the subject. But I want to go over the matter of making a diagnosis, particularly locating the seat of infection. Suppose we take an imaginary patient coming into the office and outline a plan of procedure to follow until the case is ready to be discharged.

In the first place it is very important, before starting treatment, to know what part of the genito-urinary tract is affected, and frequently this information can be gained only by a most careful examination. The first step is to strip the anterior urethra, to determine if material can be obtained for the purpose of examination. If so, a smear is made and examined. The patient is then asked to void, the first and second specimens of

urine being examined macroscopically. The glans penis is then thoroughly cleansed with alcohol, and a rectal examination is made. The condition of the vesicles and prostate is noted and material for a smear is obtained by making a vigorous, but not unnecessarily rough, massage. The urethra and the external surface having been thoroughly cleansed, we know that any pus or micro-organisms found in this material must come from the vesicles or prostate, or both.

In the absence of the gonococcus, which is rarely found either intra or extra-cellular in a prostatic smear, I give more attention to the amount of pus found than to anything else. The laboratory reports the pus as occasional (from one to three cells to a microscopic field), few (from four to seven to a field), or many (more than eight to a field). An occasional pus cell is regarded as negative, a few as doubtful, while many are considered as evidence that the condition has never been cleared up. Mixed bacteria are practically always found, but, in the absence of pus. I pay very little attention to anything but the gonococcus.

If the first examination is negative another smear is made two or three days later, and if nothing more than a few pus cells is found, a third examination is made after three or four days more, the material from the vesicles and prostate being cultured in addition to the direct smear examination. The culture is incubated for ten to twenty-one days before being discarded as negative.

At any one of these visits the patient is given a slide and told to obtain whatever material he can by thoroughly stripping the urethra immediately upon arising in the morning. Also an examination is made to determine whether or not there are any strictures. If the meatus is not large enough to admit a number 26F. acorn tip, a meatotomy wide enough to allow the passage of a number 32F. or 34F. tip is performed. The size and location of all strictures are noted.

Smears are made from two ejaculated specimens obtained about a week apart, and if all of these examinations prove negative the patient is given a provocative injection of one per cent silver nitrate solution and asked to report at the office the next

morning before urinating so that it can be definitely determined whether or not there is any urethral discharge. If there is, a smear and culture are made.

This same procedure is followed in treated cases to determine when they are ready to be discharged, except that they are told to report again after one month's rest, when a smear and culture are made from the prostate, and also from any material that can be expressed from the urethra. I go into this in such detail to stress the importance of *knowing* when a cure has been obtained, and not just guessing at it after one or two careless examinations.

Treatment

Posterior infections are treated three times a week—with diathermy, positive galvanism and sinusoidal massage. I have formed the habit of treating both vesicles as well as the prostate, whether or not they are palpable, or a history of epididymitis is obtained.

Diathermy

As a preliminary to this treatment I usually give a posterior irrigation of potassium permanganate, leaving a small amount of the solution in the bladder during the treatment. An intravenous injection of mercurochrome or acriflavine can also be given.

For giving a diathermy treatment the patient lies face down, with a piece of block tin, 6x8 inches, applied to the lower abdomen. The prostatic electrode is inserted well into the rectum and turned a little to one side to cover one vesicle. The current is turned on and slowly increased to the individual patient's point of tolerance. I have found that most of them will take 1000 milliamperes, and occasionally one will tolerate as much as 1400. After 20 minutes the electrode is turned to the opposite side and the other vesicle treated for a similar period, then the electrode is withdrawn slightly to cover the prostate for another 20 minutes, making an hour in all. Following the treatment the vesicles and prostate are gently massaged.

A variation of this treatment can be given by using a metal electrode in the posterior urethra and a piece of block tin, about 3x4 inches in size, on the back or buttocks. I have three special electrodes, sizes 22, 26 and 30F., 3 inches in length, with a slight

curve, which are made to screw onto the regular cervical electrode handle. This treatment is given for 30 to 45 minutes, and it is surprising how quickly the long posterior shreds disappear from the urine.

Galvanism

Either positive galvanism or the sine wave can be used at the next visit, two days after the diathermy treatment. Galvanism is given with any good galvanic generator, using the carbon ball electrode in the rectum and the negative electrode over the lower abdomen. I start with 8 milliamperes, increasing to 10 milliamperes for the second and all subsequent treatments. The vesicles and prostate can be treated just as with diathermy, starting with three minutes to each and increasing the time one minute at each sitting, until 7 or 8 minutes is reached. That makes 21 to 24 minutes for the entire treatment, and I have never found it necessary to go beyond that. I also massage the vesicles and prostate following this treatment.

Sine Wave

This treatment is also preceded by a posterior irrigation of potassium permanganate solution, as for diathermy. For sinusoidal massage I have been using the Morse Wave Generator with No. 7 cam, giving 44 contractions per minute. The same electrode that is used for the negative pole in the galvanic treatment is applied to the abdomen and the metal prostatic electrode inserted in the rectum over the vesicles, and prostate as before. The indirect current hook-up is made and the current increased until the contraction is felt in the rectum. The duration of each treatment is the same as for positive galvanism. None of these treatments should be pushed to the point where they cause the patient the slightest pain.

This procedure, diathermy, galvanism and the sine wave, is continued for four or five weeks, when smears are examined to determine what progress has been made. If much pus is still evident, treatment is carried on for another two or three weeks, or until a cure has been effected, as shown by repeated negative smears and cultures.

Stricture

This condition presents one of our greatest problems in treating gonorrhea. I have tried a great many things but I believe

the best results can be obtained, in the majority of cases, with a combination of negative galvanism and diathermy. Occasionally, especially where we are dealing with a vascular stricture, negative galvanism will aggravate the condition, and must be discontinued.

The size of the stricture to be treated is first determined by passing olive-tipped bougies until one is found that will just slip through. Suppose this is a number 20F. A size 22 is then attached to the negative pole of the galvanic generator and the positive electrode applied to the lower spine, with the patient in the sitting position. I use a scale calling for one-half to one milliamperes for a size 16 tip, up to four and a half to 5 milliamperes for a No. 32 tip. The bougie is introduced to the stricture and held in place while the current is turned on and gradually increased to the point desired. With only the slightest pressure the electrode will usually slip through the stricture in from two to eight minutes. If it fails to pass in that time the treatment should be discontinued and a smaller tip used at the next sitting. These treatments can be given every five or six days unless accompanied by much bleeding, in which case they should be discontinued until the urethra has had time to heal. I never increase the size of the bougie until the one used at the last treatment slips through the stricture in two or three minutes.

Following each treatment with negative galvanism 30 minutes of diathermy is given, for which I use the special electrodes already described, with a small piece of block tin applied to the back or buttocks. I find the point of tolerance to be from 300 to 900 milliamperes, depending upon how far the electrode is inserted into the urethra. In treating strictures, however, it is not essential to secure the greatest amount of heat possible, as the results are just as good when a milder temperature (103 to 105 degrees F.) is used. This treatment can also be given with a small piece of block tin applied to the under surface of the penis as the indifferent electrode.

Determining when and how to treat a stricture is a matter of individual judgment. It is said that if a stricture is of No. 26 caliber or larger it should be left alone. I believe that a No. 34

stricture in one patient can cause more trouble than a No. 24 in another. It depends upon whether or not it is harboring the gonococcus. If so it calls for treatment, not necessarily with the idea of increasing its caliber, but for the purpose of eliminating the causative organism, the presence of which can be determined in some cases only by culturing the morning drop for a period of two to three weeks. One of the most effective ways of ridding a stricture of gonococci, and this applies also to the glands of Littre, is by means of the Kohlman dilator, with mercurochrome, acriflavine, silvol, argyrol, or any drug of known value. With the patient in a sitting position the instrument is introduced and dilated to a point two sizes larger than the smallest stricture. It is held in a vertical position and the urethra filled to the meatus with the drug to be used. I use mercurochrome (one-half to one per cent), acriflavine (1-2000 to 1-500), and neosilvol (25 per cent), and usually about three such treatments of 30 to 45 minutes duration, will bring about the desired result. I use all three of these drugs in each case, applying a different one at each sitting. This treatment is still more effective if followed by 30 to 45 minutes of diathermy to the urethra.

(Reprinted from The Journal of the Indiana State Medical Association, July, 1925)

Reserve Your Copy of the Book of Lectures

The complete report of all lectures and clinics at the Fourth Annual Physiotherapeutic Convention at the Drake Hotel, will shortly be available in the form of a handsome bound volume of some seven or eight hundred pages. Type is now being set for this book, and it will be produced as soon as possible. If you would like to receive a copy, please send us your reservation now, so that we may include your order in the printing of the current edition. While we cannot forecast the cost of the book, it will be moderate for a volume of this kind, and will depend in large measure on the number of reservations received. The larger the edition, the smaller the proportionate cost.

Uses of Physiotherapy in a General Hospital

By E. C. HENRY, M. D.

Chief Surgeon Lord Lister Hospital, Omaha, Neb.

Probably two entirely different diseases will illustrate the utility of Physiotherapy in a general hospital—Carbuncle and Pneumonia. Never start treating a carbuncle until an examination of the urine and the blood have been made as to their sugar content. Often this form of infection is grafted onto a diabetic and will be fatal regardless of any kind of treatment.

A diabetic is always a poor surgical risk.

He is a bankrupt. He has no comeback.

He has no reserve; no fight in him. This being the case we are glad to have developed a method of treatment that avoids all the risk of an operation, conserves all their vitality and at the same time meets the indications locally.

First comes x-ray over the carbuncle and its immediate vicinity; then a larger area of radiant light, then directly over the inflamed part, the Actinic ray.

To prevent the absorption of the toxins, a paste of Sulphate of Magnesia and Glycerin is excellent. Hot packs of Saturated Solution of Boric Acid are most useful.

I hesitate to mention our treatment of pneumonia because of our limited experience. We have been using Diathermy for two years on our pneumonia cases with most excellent results. To make sure, doubly sure, our cases are typed, blood counts made and all the physical signs noted.

We began the treatment with diathermy with the greatest doubts. It did not appeal to us as being rational. But after its adoption by the U. S. Navy and reading Stewart's book on pneumonia, we decided to give it a trial.

Our patients are more enthusiastic than we are. The relief from pain is almost immediate. The ability to breathe comes in a few hours and the fever is lowered in ten to twelve hours.

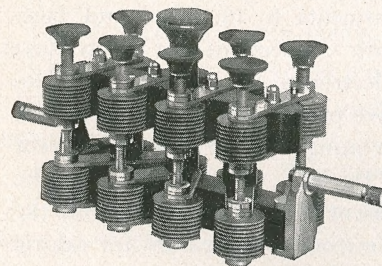
Loomis said that pneumonia was the natural way for a person over 70 to die. Many old people will go the pneumonia road but hundreds of young, strong, vigorous people can be saved by Diathermy.

Physiotherapy is a wonderful addition to our armamentarium. It must not be expected to cure or even be used in all cases. First of all, let us become skillful in diagnosis, then expert in selecting the modality indicated. Sometimes we will want strychnia, again antitoxin and at another time physiological rest or finally it may be some form of Physiotherapy.

(Abstracted from Med. Her.)

Is Your Diathermy Machine Up to Date?

There are still in existence a few of the old style *spark-gaps* which were supplied with diathermy cabinets before the invention of the vastly improved Kolischer type. If your cabinet is among the number thus equipped, we would recommend that you make the change without delay to the Kolischer Spark Gap. You will find it well worth while, both in convenience of operation and in improved efficiency of your machine.



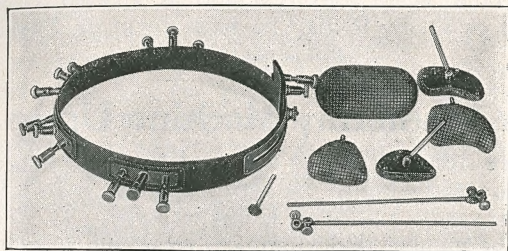
The Kolischer is a vast improvement over any other type of Spark Gap ever devised for any high frequency machine. It will fit the supports on any Fischer or Thompson-Plaster Styles "F" and "F-O" machines, as well as the Types "L," "L-O" and "Military"

models without alterations or other attachments.

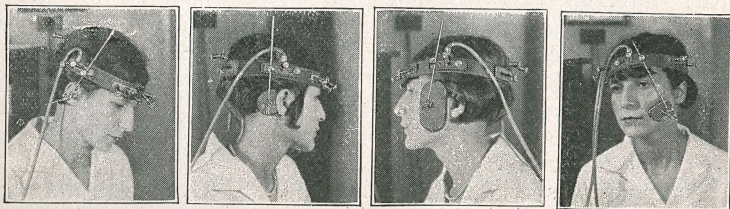
This new Multiple Spark Gap is equipped with 16 Tungsten spark interrupter points, adequate copper flanging to carry away all heat, and individual control for each set of tips as well as master controller for simultaneous adjustment. Quiet, perfect control is possible at any voltage or milliamperage, more constant discharge obtained at any setting, and the regulation is gradual—as compared to the usual jumps—the utmost in utility and flexibility.

Write us for special proposition. We will cooperate with you in bringing your diathermy machine up-to-date

The Cottle-Hollender Head Band and Electrodes



This perfected head band is a wonderful help to the physician in giving diathermy treatments to the head and face. Outfit consists of headband with connections for electrodes; electrode holders, and special electrodes. Headband and electrodes are readily adjusted to give proper pressure in any combination of applications. In treating the ear, the indifferent electrode is placed anterior to the ear, while in treating the sinuses and the face the indifferent electrode is placed on the nape of the neck. Small tube electrode may be used for caloric testing of labyrinth.



Diathermy in general is indicated for the absorption of effusions and the softening of organized exudates and fibrous tissues. It is furthermore indicated in the treatment of chronic suppurations and for the relief of pain. These indications in eye, ear, nose and face affections also call for diathermy. Thus the following are conditions in which diathermy may be of great value:

Ear Conditions

Chronic catarrhal otitis media.

Chronic suppurative otitis media (non-surgical type).

Sub-acute and acute otitis media (after artificial or spontaneous rupture of drum).

Nose Conditions

Chronic sinus disease after medical and surgical measures have proved of no avail.

Eye Conditions

All conditions where heat is used frequently.

Face Conditions

Facial palsy, trigeminal neuralgia, painful teeth, sub-acute painful tonsillitis.

The Cottle-Hollender Head Band and Electrode Set is supplied complete, with electrode holders and special electrodes.

Write for full details and prices.

A. M. A. Council on Physical Therapy is Established

Morris Fishbein, M. D., Editor of the J. A. M. A., in a paper on "Physical Therapy" printed in the Journal for Oct. 3, 1925, concludes his article with this statement:

At the last annual session of the American Medical Association, held in Atlantic City, the House of Delegates, at the request of numerous members of the profession, voted the establishment of a Council on Physical Therapy, consisting of chemists, physicists, physiologists, pathologists and clinicians, who are to evaluate the actual worth of physiotherapeutic apparatus and methods, and to keep the medical public informed by regular statements of the actual truth or fallacy of such claims. At the meeting of the Board of Trustees held in Chicago early this month, a tentative list of membership for such a council was drawn up. It includes men who are leaders in the field of scientific medicine and in the specialties that have been mentioned, and representatives of the greatest universities and institutions for research in physics and physical therapy that exist in this country. Practically all of these men have volunteered to serve without a cent of compensation in order to give the medical profession unbiased and scientific statements concerning the physical therapy field. . . . And the medical profession may confidently look forward to the time when the path between the vast accumulation of discarded refuse, jumbled wires, rusted hydrotherapeutic apparatus, peculiar tables and benches, worn-out electric bulbs, and other queer therapeutic apparatus, and the path leading by simple and clean methods to honest therapy will be clear. It is significant that the American Electrotherapeutic Association chose of its own accord to ask the American Medical Association for the appointment of such a council; that officers have taken steps to put it clearly on the side of scientific therapeutics, and that in the arrangement of its program they endeavored to secure material representing actual investigation rather than the exploitation of unknown devices or of therapeutic fallacies.

Sunlight for Babies

By MARTHA M. ELIOT, M. D.

It is pointed out that treatment of disease with sunlight, known as heliotherapy, has been used to some extent for many centuries. Its value in treating tuberculosis has long been recognized. It has recently been shown that rickets, the commonest of all diseases of infancy, can be cured by treatment with sunlight or with light from artificial sun lamps. The development of this disease can be controlled and the deformities prevented by sunlight. Rickets develops during the first weeks of life in a very large proportion of babies. Sun baths, as well as cod liver oil, must be given at this time. Window glass does not allow the active ultra-violet rays to penetrate. In Northern latitudes the sun's rays must pass obliquely through a greater depth of atmosphere before reaching the surface of the earth. This filters out much of the ultra-violet light. Sun baths in the direct sunlight constitute the simplest method of giving the baby enough ultra-violet light. These should be begun when the baby is about three or four weeks old. The exact date when sun baths may be started will vary with the latitude and season. The first bath should be for ten or fifteen minutes only. Each day thereafter the time of exposure should be increased from three to five minutes until the baby is directly in the sun one hour in the morning and one hour in the afternoon. The head should be protected when the baby is in the sun between ten and three o'clock. A good tan color is evidence that the ultra-violet rays are being effective.

(Child Health Bulletin, June, 1925)

Congratulations, Dr. Kobak

At a recent meeting of the International Congress of Radiology and Physiotherapy in London, England, Disraeli Kobak, M. D., was made an honorary president of the organization. The editor of Fischer's Magazine wishes to join the many friends of Dr. Kobak in congratulating him on this well-earned compliment to his standing in the field of Physiotherapy.

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Diathermy as an Adjunct to Surgery

By LLOYD M. OTIS, M. D.
Celina, Ohio

Diathermy is a high frequency current oscillating or alternating many hundred thousand times a second. Where the two poles meet internally, warmth or heat with its effects is produced. It is thermopenetration, an internal poultice, and herein lies the success of this treatment as contrasted with our former method when the heat was applied externally with only a slight penetration.

With diathermy, the deepest portions of the anatomy can be and are thoroughly heated, while the surface is but slightly warmed.

The hyperaemia produced by diathermy has the effect of removing blood stasis and relieving pain. It increases metabolism by opening the blood vessels and lymph channels, activates phagocytes and enzymes by increasing their number and also osmotic processes. Such rapid oscillations produce a vibratory effect upon each molecule reactivating all cells.

The tissues being flushed with blood, cause an absorption of the inflammatory products and deposits while the high temperature that is generated serves to inhibit bacterial growth and promotes oxidation.

With an understanding of the physiological changes produced in the tissues by diathermy, its uses become obvious. The important things in surgery are : First, Bone, joint and muscle conditions; Second, Post-operative pneumonia; Third; Disturbance of circulation; and Fourth, Malignancy.

Inflammation of muscles and tendons caused by strains and direct violence, also traumatic synovitis and bursitis, are relieved successfully by diathermy. One not employing electric modalities in such cases secures rest and relieves muscle spasm by strapping and by casts; he likewise overlooks adhesions, or at least, some organization of the infiltrates. Diathermy relieves muscle spasm and pain effectively and quickly, perhaps the first treatment, and as well promotes absorption, instead of organiza-

tion of the infiltrate, and restoration is completed at a much earlier date.

One of the most aggravating and perplexing post operative conditions to encounter is hiccough, resisting all known remedies. It is easily relieved by diathermy. One or two treatments rarely ever will fail to arrest the diaphragmatic spasm.

After a fracture is immobilized, diathermy is valuable in keeping a good circulation and thereby promoting a more rapid repair. In the aged, it is found advantageous. Callous formation may be either increased or decreased, depending on technique.

It was during the war we were given such glowing reports in the treatment of pneumonia by diathermy; in both non-operative and post-operative cases it seemed almost a specific. Two case histories may explain much better the value and technique of same.

Case Reports

Mr. H. L., confectioner, aged 53. On April 13, he had a chill lasting about 20 minutes. In a few hours he developed a severe pain in the lower right chest, considerably aggravated by a dry cough. At noon, the following day, he was removed to the hospital. Upon examination, the lower right lobe of his lung presented increased tactile fremitus, dullness upon percussion, tubular breathing upon auscultation and coughing a bloody sputum, temperature 104, pulse 144, respiration 30, blood count 28250 leucocytes. Diagnosis: Lobar pneumonia.

Immediately a treatment with diathermy was instituted lasting 45 minutes. At 3 P. M. same day, temperature was 103, pulse 120, and a more comfortable feeling was reported. In the evening he perspired freely and rested well after midnight. At 6 A. M. the next morning his temperature 101, pulse 112, respirations 28. At 7:30 A. M. another diathermy treatment was given and at 9 A. M. temperature 99.2, pulse 122, respirations 28. In the afternoon another treatment was given lasting 1 hour, and at 6 P. M. temperature was 100, pulse 106, respirations 28. At 6 A. M. the following day his temperature had dropped to 98.2, pulse 86, respiration 22; at 6 P. M., however, his temperature was 99.2, pulse 100, respirations 28. This was

his last rise in temperature, crisis taking place on the 3rd day. Two daily treatments with diathermy were continued until he left the hospital on the 6th day. Five days after the onset he was walking about the hospital.

This case is presented, although not surgical, as an example of what can be done in severe cases. The following post-operative case of pneumonia is more to the point.

A man, aged 23, operated upon January 21, 1924, for hernia. On January 24th at 4 P. M. he had a temperature of 102.6, pulse 116, respirations 30. A physical examination disclosed the signs of a post-operative pneumonia. At 6:30 diathermy was given. The next day at four P. M. his temperature was 101.8, pulse 110, respirations 28. Diathermy treatment was given twice each day and on the 3rd day his temperature was 99, pulse 82, respirations 22. After that, his temperature, pulse and respiration remained normal.

These are only two cases, though many thousands are now on record to show the efficiency of diathermy in the treatment of pneumonia.

Disturbances of circulation where there is a deficient blood supply, a stasis, perhaps after a breast amputation or in the stump of an amputated limb, are benefited, probably corrected by diathermy. To demonstrate the vascularity produced by high frequency current, all that is necessary is for a surgeon to operate upon a part that has previously been subjected to this treatment. He will imagine he is working in a cobweb of blood vessels. It is by reason of this fact a valuable assistant in the treatment of x-ray burns.

In thrombo angitis obliterans, it is perhaps the best treatment known. The response is in general like the following case. A laboring man in middle thirties froze his fingers and toes during the winter of 1920. In 1923 the hands and fingers became painful and sensitive. In three weeks the pulse in fingers was gone, and they were turning black. Pain at this time was very severe. Diathermy began and 10 hours of relief was offered after the first treatment. Circulation returned and the ulceration gradually healed. Eight to ten hours after each treatment pain would return and continued this way until ulcers healed.

Perhaps the only use of diathermy generally known to the surgeon is the electric coagulation treatment used in malignancy. It has proved itself far superior to our other forms of cauterization because the heat is generated within the tissues themselves rather than depending upon the heat to radiate from the surface. Hence it is seen that it is very efficient in destroying deep malignant cells.

Conclusions

Surgery has found a valuable assistant in physiotherapy, First, in dealing with infections; Second, by the raising of calcium and phosphorus content of the blood and the general increase in metabolism; Third, the maintenance of a good circulation in and about a fracture or stump of an amputation, the removal of indurations and exudates in restoring joints to action. The stopping of muscular spasms, especially hiccough, the return to function of muscles and nerves that seem all but lost, the rescuing of post-operative pneumonia in a few days, and the removal of stasis in any part that threatens healing are factors that are appreciated by all of the surgical profession.

(Abstracted from *O. State Med. Jour.*, Oct., 1925)

Editor's Note

Dr. Otis gave a very interesting talk at the 4th Annual Physiotherapeutic Convention, at which he presented actual cases treated by him. While too late to connect with this issue of Fischer's Magazine, we shall endeavor to have a full report of this talk in an early issue.

After Care of Knee Joint Injuries

Philip H. Kreuscher, M. D., writing in the Medical Herald and Physiotherapist, discusses the treatment of knee joint injuries at some length. In conclusion, he says:

The after-care requires the use of such appliances as are necessary to hold the tissues in position. Active and passive motion must be sufficiently early to avoid excessive adhesions but not so late as to permit peri-articular fixations to form. The application of physiotherapeutic measures, especially diathermy and heliotherapy, must be utilized to the fullest extent.

Physiotherapy in Paralysis Following Anterior Poliomyelitis

By E. B. KESSLER, M. D.
St. Joseph, Mo.

The paralysis of this disease is a motor paralysis or weakening of erratic distribution, most marked in the legs. Reflexes are diminished or lost, the reaction of degeneration is present in the most severely paralyzed muscles, atrophy, retarded growth, coldness and sluggish circulation supervene in the later stages in many cases.

The treatment must necessarily be directed:

- I. To the pathology in the spinal cord.
- II. To the paralyzed muscles which are the result of this pathology.

Treatment of the Spinal Cord

1. *Diathermy*—By diathermy we can apply to the spinal cord the most efficient kind of heat, conversive heat, created in the tissue itself by its own resistance. It is indicated here for its solvent effect, to open up afferent and efferent channels, increase metabolism, carry away broken down inflammatory products, to relieve the pressure on the nerve cells by breaking up focal fibroses and scar tissue, absorbing old hemorrhages and exudates, by dilating the constricted blood vessels and bringing a fresh, wholesome supply of blood to the cord, thereby relieving the anemia and assisting nature in the regeneration of nerve cells and the establishing of new connections between motor cells and muscles.

2. *Static Condenser Discharge*—If diathermy alone be used the softer parts expand more than the hard, bony spine surrounding the cord and more pressure is created with its resultant passive hyperemia, which further interferes with the already poor and sluggish circulation. To this newly created hyperemia and increased blood supply within the cord let us now apply the static condenser discharge with its more than 100,000 volts and its ability to produce powerful, rhythmic, slow contractions, and thereby squeeze out this warm, fresh blood previously brought into this area by diathermy and assist

it on its way carrying out the waste products with it. This acts as a powerful massage of the parts treated and, so far as I can conceive, cannot be accomplished in any other way.

3. *Ionizing X-ray*—Once weekly let us ionize the cord with five milliamperes-minutes of a 5-inch back-up spark x-ray through one millimeter of aluminum filter at an 8 inch target skin distance for its chemical solvent effect upon the hardened and sclerosed tissue in the cord. Probably some of you do not believe in the ionizing x-ray dosages, but having tried it, all I can say is that it works. It does what we expect it to do. So much for the treatment of the spinal cord.

Treatment of the Paralyzed Muscles

Now, let us consider briefly the paralysis, resulting from the pathology in the cord, and its treatment. Here we find many, many muscles involved, the abdominal muscles, muscles of the back, neck, face and extremities. Statistics show 72 per cent of cases paralyzed in the abdomen, 13½ per cent in the back, 11 per cent in the neck and in a series of 90 cases, 31 showed involvement of facial muscles, but by far the greater number showed paralysis of the legs and arms. It is surprising the number of cases showing disturbances of circulation accompanied by atrophy of both bone and muscles and retarded growth, the whole group being spoken of as trophic disturbances. During cold weather such limbs become cold and blue, subcutaneous areas of discolored tissue often occur which may break down and become infected, causing indolent ulcers.

To prevent such an occurrence one should test out the various muscles and sets of muscles as to reaction of regeneration, finding out which muscles are affected and to what degree, and record these for reference during treatment of these particular muscles. The question is: what shall this treatment be?

1. *Diathermy*—Surely diathermy is indicated, for what could bring the blood to these parts with disturbed circulation and atrophy of muscle, and probably bone, as does diathermy? If these tissues be well supplied and nourished with blood we can do much to prevent the atrophy, retarded growth and trophic disturbances. Diathermize all available paralyzed and

undernourished muscles, using a small amount of sedative diathermy at the start and gradually increase the dosage as required.

2. *Slow Sinusoidal Current*—For the graduated and accurate massage and exercise of these muscles, to do just that which the patient of his own volition cannot do, to keep down or prevent the atrophy of disuse, the slow sinusoidal current is unsurpassed. Start with a very small amount of current, allow several parts of rest to one of contraction, and request the patient to concentrate his mind on moving that particular muscle and attempt to re-educate that muscle. Slowly and gradually increase the current as the muscle improves in strength, but be very careful indeed that you do not fatigue any weak muscle, as this is worse than no exercise at all. When voluntary movement is obtained request moderate and gradual exercise, warning your patient against overwork.

3. *Ultra Violet Light*—The air cooled lamp should be used for general body radiation during the whole period of treatment. Remember we are dealing with the effects of an infectious disease, a continued mild sepsis, and a loss of appetite which may persist for some time. In some cases months may elapse before the general health becomes normal, the general sequelae being much the same as after one of the acute exanthemata, and these patients need the wonderful tonic and blood building properties of ultra violet light. The disturbance of circulation and retarded growth will surely respond to this therapy.

The question now naturally arises as to how soon after the acute attack of Infantile Paralysis this treatment should be started. This undoubtedly is an important question, and I believe the success of our treatment depends much upon the decision made. According to authorities on the subject, the treatment may be divided into three phases:

(a) The acute phase—from the onset of the malady to the disappearance of tenderness.

(b) The convalescent phase—beginning at the end of the acute phase (about two weeks) and continuing as long as spontaneous improvement is marked (about 2 years).

(c) The chronic phase—when the affection has become more stationary and deformities, if present, have become established.

It is in the second or convalescent phase that we are most interested for three reasons:

(a) First, because before this time we are dealing with possible hemorrhages, congestion and irritation in the cord—a still active process in which case diathermy or any active treatment is contra-indicated.

(b) Second, because it is during the convalescent phase that these patients seek medical advice and treatment, and

(c) Third, because during this time the greatest amount of good may be accomplished.

When the acute stage of the process in the cord may be assumed to be at an end, then one may make an estimate of the damage done and plan a campaign of treatment. Pathologically the products of hemorrhage are being absorbed, edema and perivascular infiltration are diminishing, and physiologically the motor area of the brain is trying to send impulses to the affected muscles only to find the path of conduction partly or wholly blocked. All nerve cells are not destroyed. Some are only injured and may recover if treated soon. Nature in this stage is working hardest to repair and restore function and we should aid her by the most natural treatment available—Physiotherapy. The outlook is better in the first year than later, but there seems to be no time limit for obtaining beneficial results from treatment. Most deformities could be prevented, for the majority of muscles are not paralyzed at this time, but are only weakened. Impulses from the brain may be sent around the destroyed centers by new paths to the muscle. This is best accomplished by muscle training, exercise and proper treatment of weakened muscles at this time.

Conclusion

The writer believes that much of the permanent paralysis of Anterior-Poliomyelitis can be prevented if proper and scientific treatment be afforded at the proper time and faithfully pursued, and that Physiotherapy offers the greatest possibilities toward that goal of any treatment known today.

Abstracted from a paper read at the X-ray, Radium and Physiotherapy meeting, Omaha, Jan. 5, 1925.

Phototherapy in Otorhinolaryngology

By ABRAHAM R. HOLLENDER, M. D., and
MAURICE H. COTTLE, M. D.

The beneficent effects of the sun's rays in nutritional diseases has long been recognized. But it was not until the work of Finsen with the carbon arc lamp, that the true bactericidal property of the blue, violet and ultra-violet rays was realized. In otorhinolaryngology, phototherapy has been able to penetrate into the closed cavities and exert its germicidal and stimulating effect on the tissues.

The ultra-violet rays are practically completely absorbed by the skin, while the violet rays penetrate more deeply. The ultra-violet rays from the mercury quartz lamp have a superficial effect, the deep penetration depending on the distance of the lamp from the skin. The local effect in either case is considered bactericidal, and the general effect is looked upon as being biologic.

In treating chronic otorrhea, the ear is first cleansed out with suction, and an anilin dye, usually a 2 per cent mercurochrome solution is instilled into the ear canal and allowed to remain for a period of ten minutes, after which the ear is mopped dry and the lamp applied, with a suitable aural applicator, for one minute. The voltage is measured and the time is gradually increased until a three minute treatment is administered at the sixth application.

Phototherapy has proven beneficial in many other conditions, particularly the calcium deficiency diseases. Hyperesthetic rhinitis has been shown to be a calcium deficiency disease, and on this basis experiments were carried out to show the results with calcium, thyroid, parathyroid and combinations of these remedies. This calcium increase has been definitely increased by means of the ultra-violet irradiations.

Phototherapy has also proved to be useful in external skin phenomena, for example furunculosis, acne, and dermatitis pustulosa. The effect of the ultra-violet ray on the skin is not due to heat. The erythema which is produced is undoubtedly

due to some photochemical reaction affecting the arterioles. Whether or not the amount of body reaction can be gauged by the degree of erythema produced is questionable. Pigment plays an important part in the skin irradiation and may be a factor in the absorption of the rays. Proceeding on this assumption, investigators have stated that favorable results derived are due in large part to the degree of pigmentation. If a local manifestation is present, ultra-violet therapy will ameliorate the symptoms by augmenting the calcium content of the blood.

Comments Please

Each Annual Physiotherapeutic Convention is bigger and better and more productive of results than its predecessor; largely because each is conducted on the basis of past experience.

We live and learn. And, especially, we learn from you men in the field, who know just what your daily problems are and how these Conventions can help in their solution.

So we invite comments and constructive criticism on the Conventions. How can we better them, from your point of view? How can they be made more useful to you? Tell us frankly, for it is our purpose to make the Conventions truly representative of the best thought in the profession.

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Heliotherapy

Generations of laymen as well as physicians have somehow assumed that part of the beneficial effects of outdoor life is attributable to sunshine. The influence of sunlight on health and disease is being unravelled gradually. An impetus to the study has been derived from the investigations of the biologic actions of light, particularly as they are related to dietary deficiencies. It is now clearly established that exposure to ultra-violet radiations will protect against the effects of the lack of antirachitic factors in the diet. Furthermore, foods may acquire antirachitic properties by being irradiated. Recent experiments on the effect of radiation on the bactericidal power of the blood indicate that the exposure of the skin of animals to a source of ultra-violet radiation gives an increased bactericidal power to the blood and serum. It has been found that irradiation for purposes of treatment must be carefully graded, since excessive exposures cause a deterioration of the blood no less striking than the improvement obtained with smaller doses.

(Abstracted from Jour. A. M. A., May 16, 1925, Page 1498)

Personally Conducted Tour of Foreign Physiotherapeutic Clinics

As announced at the Fourth Annual Physiotherapeutic Convention, a personally conducted tour of European physiotherapeutic clinics is now being arranged by the Educational Department of H. G. Fischer & Company. The party will visit clinics in London, Paris, Glasgow, Berlin, Leysen and other centers, all arrangements being made for accommodations and for clinics conducted by eminent authorities. The cost will be nominal, going down in proportion as the number increases. We are anxious to know how many physicians wish to take advantage of this tour, and to get their views as to itinerary, etc. If you are interested, please write to the Educational Department, H. G. Fischer & Company, giving your views, and we will in turn send you full details.

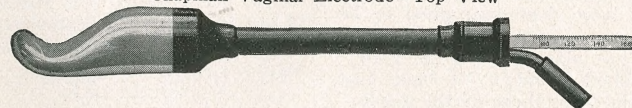
The Chapman Vaginal Electrode



Chapman Vaginal Electrode—Side View



Chapman Vaginal Electrode—Top View



Chapman Vaginal Electrode with Special Thermometer

An improved vaginal electrode which permits the use of the maximum amount of diathermic heat, properly applied to the affected parts. The instrument is introduced edgewise into the vagina and then rotated into position. When properly applied, it automatically engages the cervix within the cervical bowl and elevates and supports the uterus, while the vulva closes over the insulated vulval groove and helps to hold it in position. Cannot work out of the vagina during treatment. Because the vaginal mucosa will tolerate temperatures greatly in excess of what the skin will stand, it is possible, with this electrode, to elevate the amperage considerably above what would be possible if the non-insulated tip came in contact with the external skin. Made in two sizes, standard and small size, also supplied with or without the thermometer which permits accurate reading of internal temperature throughout the treatment. Shank or handle is of hard rubber.

Regulation size Chapman Vaginal Electrode, shank $1\frac{1}{8}$ in. diameter, cervical bowl $1\frac{3}{4}$ in. wide and $\frac{3}{8}$ in. thick. Price, complete with thermometer, \$12.00. Without thermometer, \$6.50.

Small size Chapman Vaginal Electrode, shank $\frac{1}{2}$ in. diameter, cervical bowl $1\frac{1}{8}$ in. wide and $\frac{1}{8}$ in. thick. Price, complete with thermometer, \$12.00. Without thermometer, \$6.50.

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PHYSIOTHERAPY HEADQUARTERS

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CHICAGO, ILL.

A PAGE OF FUN

A lady who had given a dinner party met her doctor in the street the following day, and stopped to speak to him.

"I am so sorry, doctor," she said, "that you were not able to come to my dinner party last night; it would have done you good to be there."

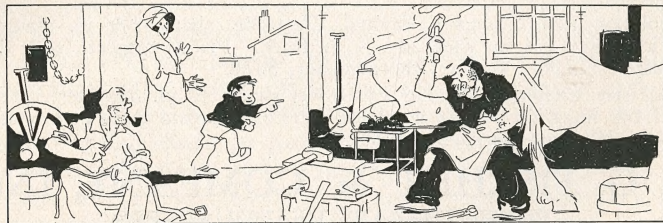
"It has already done me good," he replied tersely. "I have just prescribed for three of the guests."

—The Tatler.

□ □ □

"Step right up, ladies and gentlemen," bawled the barker through a huge megaphone, "and see the woman get sawed in two before your very eyes. All for the price of one dime, the tenth part of a daller!"

"Oh, well I'll take a chance," laughed the Crafty One to himself, "though, of course, it must be all a trick. Otherwise, they'd charge more."



Willie: "Oh, mamma, see the man building a horse!"

Mamma: "Why, Willie, he's not building a horse!"

Willie: "Of course he is! He's just nailing on the back feet!"

"I must see the doctor today. I don't like the look of my wife."

"That's an idea. I'll come with you, old man; I can't bear the sight of mine either."

□ □ □

"At last," sighed the statesman, "I am famous. The humorists are attributing their bum stories to me."

□ □ □

Your back aches because:

"Kidneys," said the herb man.

"Prostate," said the G. U. doctor.

"Flat-foot," said the shoe doctor.

"Pelvic trouble," said the gynecologist.

"Infected teeth," said the dentist.

"Mal-adjustment," said the osteopath.

"Impinged nerves," assured the chiropractor.

"It don't ache," emphasized the Christian Scientist.

—Medical Herald.

Last Call for the November Physiotherapeutic Meeting

Monday, November 9th, 1925

WM. E. HOWELL, M. D., Chicago, Ill.

"Electrocoagulation of Minor Malignancies" 10:00 to 11:00 A. M.

CARLTON L. ROWELL, M. D., Chicago, Ill.

"Diathermy in Gonorrhea" - - - 11:00 to 12:00 A. M.

CHAS. H. FREDRICKSON, M. D., Chicago, Ill.

"Hemorrhoids" - - - - - 1:30 to 2:30 P. M.

RAYMOND F. ELMER, M. D., Chicago, Ill.

"Electrocoagulation of Tonsils" - - - 2:30 to 3:30 P. M.

As those who are familiar with the work of these men will immediately recognize, this is a program of exceptional merit. All these men have built reputations for themselves in the very lines covered by their subjects. Physicians and surgeons interested in surgical diathermy and in gynecological work will find this meeting very well worth attending. Ample facilities have been provided so that every visitor is assured of a seat. There are no fees and no obligation is involved.

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