

Important Announcement

Our plans are taking shape, and we have succeeded in obtaining the services of some of the best known Physiotherapists in the country for the Chicago meeting.

Arrange that the dates

October 20-24

inclusive, be set aside for the greatest meeting of Physiotherapists of all time.

FISCHER'S MAGAZINE



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359

AUGUST, 1924

THE question for each man to settle is not what he would do if he had means, time, influence and educational advantages, but what he will do with the things he has.

—Hamilton Wright Mabie

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. II

AUGUST, 1924

No. 9

Modern Alchemy

The alchemists of olden times carried on weird and mysterious experiments in the vain effort to transmute the baser metals into virgin gold. Such experiments came to naught and their dreams have never been realized. But how much more wonderful are our transmutations of today in the fields of human thought and scientific achievements.

Into the minds of men are forever and ever entering impressions and sensations which are changed in form and substance and transmuted into wonderful expressions. Into the mind of a Marconi enters the germ of an idea—with the wireless and the marvelous manifestations of the radio as a result. Can anyone visualize or grasp the sum total of human progress as represented by the names of Pasteur, Roentgen, Morse, Bell, Edison, Watt and the Wright Brothers?

A composer of music influenced by the grandeur of an ocean sunset, a lovely pastoral, or a momentary glimpse into the depths of a human heart, transmutes his impressions into music. The artist or the poet, hearing the music, transmutes its motif into a painting or a poem that contains heart throbs for millions of his fellows.

The alchemists of old, with all their lore, failed because their efforts were made with the baser metals. They failed to realize that in life the finest material with which to work is man—his progress and his welfare. One good deed, a word or a smile, which tends to make man stronger, more responsive to human tenderness and human sympathy, is worth more than the centuries wasted in the effort to change dross into gold.

The Treatment of Pulmonary Tuberculosis by the Ultra-Violet Ray

W. B. CHAPMAN, M. D.
Carthage, Mo.

(Continued from the July issue)

I will report two cases of advanced pulmonary tuberculosis that were treated by the ultra-violet ray, both of which undoubtedly owe their lives to the use of this modality.

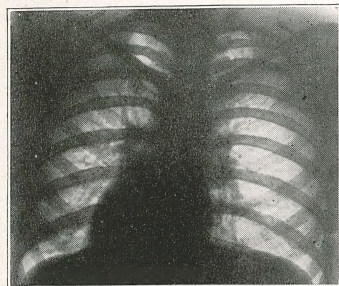
E. G. Female, blonde, age 24 years. Development of fifteen-year-old girl. Very weak and anemic. Had undergone three unsuccessful operations for tuberculosis fistulae during the past fifteen months. Examination revealed marked involvement of both apices. The old tuberculosis abscess on her right hip was discharging pus through two fistulous openings and was causing her a great deal of pain. The B. C. was 15,000; R. B. C. 4,000,000 and Hb 40 per cent. Her temperature ranged from 99 to 102 degrees Fahrenheit.

She was taken to the hospital, the tuberculosis fistulae were incised, curetted, swabbed with pure carbolic acid and packed loosely with gauze. At end of six weeks, patient left the hospital with the abscess and tuberculosis fistulae apparently well, and was placed on the usual cod-liver oil, rest, and open air treatment prescribed for sufferers from tuberculosis. At the end of about three months she was back with another fistula that opened into the old scar. This was merely incised and swabbed with iodine. It soon healed. Seven months later I was notified that she was not expected to live. She had been bedfast for six weeks and the old trouble was no better. I had her treated symptomatically until she could be moved here. Examination showed advanced tuberculosis in both lungs. She was very emaciated, and was expectorating profusely with an occasional small hemorrhage. The old fistula had opened and was draining again. She looked like a hopeless case.

Ultra-violet treatments were begun, using the aircooled lamp at a thirty-inch distance. The treatments were given daily, beginning with one minute the first day and increasing the exposure a minute each day until she was receiving ten minutes, front and back, at each treatment. We then maintained the time of exposure constant and shortened the distance one or two inches each day until the burner stood about fifteen inches above the body. Like most of these "T. B." sufferers, she showed extreme tolerance for the ray, and although she quickly became bronzed, she never became sunburned to the point of discomfort. (I explain this extreme tolerance of these patients to the ray as being due to the roughened, dry condition of their skin. The patients that have soft, vascular skins are the ones that burn quickly.) The ultra-violet treatments were preceded in each instance by radiating the body with the deep therapy lamp for twenty minutes over the chest and back. The distance of the lamp from the body was regulated according to the comfort of the patient, but the heat was made intensive enough to produce a flushing of the skin and a profuse perspiration. After four weeks of treatment, the patient ceased to have afternoon temperature, had gained in weight, and the appetite had improved. She continued the treatments for another thirty days, and then was sent home with instructions to return in four weeks for further treatment. On her return she was treated daily for a period of three weeks and then was dismissed clinically well. After six months she writes that she is in perfect health, has gained seventeen pounds since leaving the clinic here and is very grateful for all that we did for her. One point worth mentioning, is the fact that the tuberculous fistula healed rapidly during the ultra-violet treatments and has given her no more trouble.

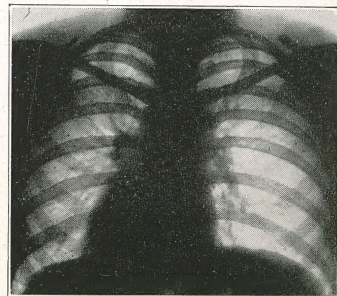
The other case that I wish to report is almost a parallel to the one just described. With this patient, however, the trouble was entirely pulmonary. When first presented for treatment, he was so sick that he had to be placed in the hospital for several weeks and treated symptomatically

before he could be brought to the clinic for ultra-violet treatments. Briefly, his case presented the following points of interest:



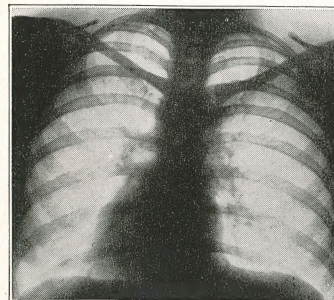
Before Treatment

W. D., boy, aged 15 years. Tall, anemic, hollow-chested. When presented for treatment, he was running a temperature of 104 degrees Fahrenheit, was coughing constantly and expectorating huge quantities of thick, creamy pus. He was too weak to stand and had to be placed in the hospital for several weeks before he could be brought to the clinic here for treatment. X-Ray examination showed almost complete involvement of the right lung with cavitation. There was also some involvement of the left upper. The patient was so toxic that we had difficulty in inducing him to take a little whiskey and other stimulants in sufficient quantity to maintain life. Operation for drainage of the rotten lung was suggested and abandoned as a hopeless procedure. His life was despaired of. At the end of two weeks, however, he began to take more nourishment, and we soon began bringing him to the clinic on warm days for ultra-violet treatments. Within less than a month he was able to make the trip himself on the street-car. His temperature was now normal most of the time, and the expectoration was not nearly so profuse. He continued the treatments for six weeks longer, during which time he gained rapidly in weight and strength. His father then took him to Arizona in the hope that the dry climate would prove more healthful than the changeable climate of



During Treatment

the Mississippi Valley. After four months he writes that the boy has continued to gain and is getting along nicely. Since going to Arizona, I have continued to instruct them relative to sunshine, diet, rest, and general hygienic measures.



Case after 10 weeks

Sputum examinations of each of the above patients showed tubercle bacilli in abundance at the time of their entrance to the clinic. These decreased rapidly under the ultra-violet treatment.

I mention these cases simply because they illustrate what can be accomplished by the careful and persistent use of the ultra-violet ray. Both cases were considered hopeless by their attending physicians, and with the usual symptomatic treatment, would doubtless have died.

SUMMARY

1. The actinic or ultra-violet ray is not a specific for pulmonary tuberculosis, but is perhaps the most valuable contribution to the treatment of this dread disease that has been produced in recent years.
2. To treat this condition successfully, the physician must study each case separately, prescribe proper drugs, regulate the diet, assign certain hours for rest, instruct regarding exercise and general hygiene, and leave nothing undone that will help to restore the patient to health.
3. The treatments should not be given by an inexperienced technician, but by one that is trained in the use of the apparatus, in hygiene, and in the care of the sick.
4. When carefully and scientifically treated, as outlined above, we may confidently expect a clinical cure even in advanced cases of pulmonary tuberculosis.

Measured Wave Currents

By FREDERICK H. MORSE, M. D.

With an artist or a sculptor, work is successful according to the accuracy with which he reproduces or imitates Nature. Physiologists understand and biologists have accurately demonstrated that Nature provides in the vegetable and animal kingdom nourishment to maintain normal nutrition of the human body.

Enterprising pharmaceutical manipulators, as well as scientific pharmacists, attempt to arrange the seven essential elements that make up the structure of the body so that when one or more elements are deficient they can be supplied. There always has been and always will be discoveries of drugs and combinations of drugs to attempt to supply what may be needed to maintain normal nutrition or restore metabolism either general or local.

The more accurately the indications for determining what the insufficient element may be, the more definite and scientific is the medication that follows. And again, the more accurate the fruit or vegetable containing the necessary ingredient can be adapted to the requirements of the individual, the quicker will be the absorption of that essential element when taken from a vegetable instead of a medicinal source. In other words, from an organic origin versus an inorganic.

If the absorption of essential food ingredients is taken according to Nature's original plan sufficient to maintain and not over-strain the organism, and according to best physiological teachings, regular periods of ingestion, digestion, and absorption and a corresponding period of rest that Nature may recover itself from the possible exertion of the above metabolic process, other things being equal, man should live a hundred years.

Modern life, with its many deviations of maintaining existence all the way from unbalanced diet to ill-fitting gar-

ments and footwear, have so distorted the original plan that the old phrase of "three score and ten" too often closes the life performance with a practical cessation of mental and physical activity or actual demise with the majority.

The above summary of undisputable facts does not in any way help the sick, only as a warning that humans, like vegetation, are subject to decay and also that this degenerative process, barring accidents and acute diseases, comes sooner or later in some part of the body where something has happened to give it a start.

The disappointing effect of stimulants, the unreliability of medicine only as a palliative measure, behooves us to think seriously upon all means and methods to prolong existence by preventable measures. Life depends upon normal cell activity, and that cell activity varies greatly in different tissues and organs and should be recognized as the sine qua non in restoring functional activity; that point may be carried further by saying the underlying law of life itself originates and is perpetuated only through rhythmic impulses or vibrations.

The propriety of utilizing in medicine for restoring function by the use of many processes brought before the profession during the last twenty years should, if intelligently appreciated, be a means of prolonging existence and bringing more comfort to suffering individuals than the whole product of the century of discoveries previous.

Thermo-therapy and photo-therapy are dependent upon rays of varying magnitude. The X-ray for therapeutic applications because of its special virtues has deeper penetrating power. High frequency has in its vacuum and non-vacuum electrode applicators a localized form of heat, limited in its usefulness. Diathermy in its usual mode of application may be made to produce an immense amount of heat localized in diseased areas as desired. Static electricity with its most common and valuable form of application to and over diseased areas, under the usual name wave current, has a special virtue of its own because of its ability to liberate

near and distant toxæmia and other form of deleterious material. And last, but from a therapeutic point of view in the writer's opinion, the most important, the direct or commonly called galvanic current.

Wave current as may be applied from the different modalities mentioned may consist of any form of mechanism that will permit heat, light, electricity, or motion to manifest its beneficial action when applied to the body in a way that will synchronize as near as possible the well-known physiological action of that part.

If a galvanic current is applied through a portion of the body with moist surface electrodes, up to the point of easy toleration, in a short space of time the electrons and molecules will so arrange and re-arrange their positions that a current flow is actually established from the positive to the negative pole. If this current, for instance twenty-five milliamperes, is applied suddenly the skin resistance will be so great as to not only cause shock and pain but the contraction at first will actually retard the process of transmission as compared with the same amount of current having been allowed to be turned on gradually.

If the current is suddenly reversed unpleasant shock will follow, muscular spasm will ensue especially about the positive pole, and the process is much interfered with. This is specially demonstrated in the use of the so-called "sinusoidal" current, which is constantly reversing itself, and whether it is fast or slow, weak or strong, the same characteristic property is always present; and the one object to be looked for is frustrated by this current reversal.

The application of a powerful light, the thermo-penetration variety, brought suddenly to the body will have an unsalutary effect compared with its gradual approach. The same applies to high frequency applications, diathermy, static wave current, and even mechanical vibration.

(Cont'd on page 10)

Special Program for Our Monthly Physiotherapeutic Meeting

Monday, September 8, 1924

WM. E. HOWELL, M. D., associate of Dr. Plank, at the American Hospital, Chicago, will explain the "Ease and Effectiveness of Electro-coagulation Operations," 9:30 to 10:15 A.M.

C. H. FREDERICKSON, M. D., of the Veteran's Bureau will talk on the "Advisability of Physiotherapy in General Practice," 10:15 to 11:00 A.M.

R. F. ELMER, M. D., will conduct a very interesting clinic on the "Electro-coagulation of Tonsils." We will endeavor to have a number of cases on hand, that the actual work, as well as some results obtained, may be seen. 11:00 to 12 noon.

The entire afternoon will be devoted to practical demonstrations on various pieces of Electrical apparatus.

How to Get Here:

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

BY ELEVATED — Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont; or

BY SURFACE CAR — Western Avenue to Wabansia Avenue, and one block east to Claremont.

We have ample space for all of you. Remember the date and come to our Lecture and Demonstrating Rooms at

**2335 WABANSIA AVENUE
CHICAGO**

We have heard from some physicians that Monday is a rather hard day to get away from the office, and that probably Wednesday or Thursday will be found more suitable. This is a vital matter, and we wish to obtain the opinions of a number that the best day of the month be selected. What is your opinion, doctor???

H. G. FISCHER & CO., Inc., Phone Armitage 0323

The writer has seen in various mechanism the above modalities adapted to surging devices but only in rare instances has the principle been adopted, only as applies to synchronizing the alternating and uni-directional surging methods as applies to the selective motion surging wave generator.

A well-known manufacturer of light treatment devices, along the line of my thoughts and suggestions, is already arranging mechanism for the rhythmic measured application instead of the persistent steady glow as is usually understood.

Let us hope that this surging principle as applied to all Nature's functions, having a period of rest and a period of activity, on defective functional areas with forced activity will be more generally adopted.

462 Boylston Street,
Boston, Massachusetts.

Read before the Central Society of Physical Therapists, June 17, 1924.

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X-Ray Treatment of Lesions of the Thyroid Gland.

John G. Williams, M. D., Long Island M. J.

Goiters are classified as (1) simple, cystic, colloidal; (2) adenoma; (3) exophthalmic; (4) malignant. Adenomata with hyperthyroid symptoms, exophthalmics and malignant goiters are suitable for x-ray therapy. Rest and freedom from worry and excitement, together with medical treatment are essential concomitants of x-ray therapy. Cases not completely cured are better surgical risks after this form of treatment. Surgery is indicated in malignant disease of the thyroid whenever complete removal of the growth is possible and if inoperable the case should be treated by x-ray as this will probably relieve the symptoms and may possibly cure the disease. If symptoms persist other surgery than x-ray therapy should be used.

Ultra-Violet Ray Therapy in Dermatology

JACK W. JONES

Southern, M. J., 16: 423

In dermatology the therapeutic value of the ultraviolet rays depends upon the bacteriologic and stimulative action. The action of the rays upon the skin is manifested symptomatically by an erythema of the part exposed. Thus, a stimulative erythema, a regenerative erythema or a destructive erythema can be obtained, depending upon the length of exposure. Scalp conditions, particularly seborrheic dermatitis or alopecia premature from seborrhea, alopecia areata and psoriasis, seems to react very favorably to ultraviolet rays. In lupus erythematosus, particularly of the chronic discoid type, the ultraviolet rays give promising results, but here again, as in alopecia areata, the primary focus (whether tuberculous or otherwise) must receive attention. In the treatment of adenom sebaceum the rays are about the only agent upon which much dependence can be placed, and the same might be said in regard to the chronic sluggish ulceration caused by trauma or infection, in which epithelium seemingly refuses to grow. The literature contains reports of successful results following ultraviolet-ray treatment of nevus flammens and parapsoriasis.

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Suction Tonsillectomy

For those of our readers who have apparatus with Suction attachment we refer to a very interesting article on suction as aid to tonsillectomy by J. E. Braunstein, M. D. in the Eye, Ear, Nose and Throat Monthly for March, 1924. The various instruments illustrated are best used in connection with Fischer Cabinets equipped with the Motor with Vacuum and Pressure Pump. We will be glad to tell those who may be interested more about this technic.

Quartz Light Therapy

By LEO C. DONNELLY, M. D.

607 Kresge Building, Detroit, Michigan

Generally speaking, an infected, ingrown nail should be completely cured in four or five days when promptly treated by surgical measures and the proper use of ultra violet rays, both before and after such procedure.

Actual treatment begins by the removal of scabs and pus, followed by a first-degree reaction procured by a treatment of short duration with the Quartz lamp. This sterilizes surrounding tissue, causing at the same time a flushing of superficial blood-vessels, thereby warding off the spread of infection.

We then use a third-degree reaction on the area of infection where the nail is to be removed, with consequent sterilization of the field of operation and a material lessening of pain sensibility as well. After removal of the usual V-shaped portion of nail and infected tissue, a further second-degree Ultra Violet Ray reaction is given to the resulting wound, inducing haemolysis, insuring prompt healing without infection, and thereby giving much quicker and more satisfactory results than otherwise could be anticipated.

* * * *

Where infection is evidenced between the toes, often at the base of soft corns, there, again, Quartz lamp treatment is indicated in order to secure the most favorable results. The attendant abscess is generally deeply seated—dorsum of foot swollen and sensitive.

The entire foot and lower leg is given a first-degree Ultra Violet Ray reaction with the Alpine Sun Lamp before making an incision into the abscess. After the incision is made and proper drainage secured, the Kromayer lamp is used, passing a suitable Quartz applicator into the incised opening, with the purpose of sterilizing all portions of the abscess base. Following this procedure, markedly reparative changes are manifest.

The Exhibit of H. G. Fischer & Co., Inc.



The Exhibit of Physiotherapeutic Apparatus at the American Medical Association Convention, on the Municipal Pier, Chicago, June 9th to 14th, 1924.

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Electric Coagulation or Endothermy. We have for years used fulguration in attacking papillomata through our open air cystoscope with the patient in the knee-chest posture, but have always found that the chief difficulty was that we were able to make so little impression on a massive tumor at one sitting, even though we attacked the pedicle. Fulguration seems to yield its best results in sparking out superficial flat areas of disease where the papillary tumor is disseminated. In papillary carcinomata with infiltration, it is of course worse than useless. It is not our desire, however, to deprecate an agent which in a limited field has proven such an advance over previous ineffective methods.

The Fischer "Diathermo Indicator"

It is with extreme pleasure that we announce the perfection of a method whereby physicians may know exactly at what degree of temperature they are treating, when employing Diathermy.



Suggestions and requests have come in steadily, in reference to some device that would indicate with extreme exactness just what heat was being produced within the tissues, and so much importance was placed back of this apparent necessity, that we set our engineers to the task without delay.

The obstacles to be overcome were numerous; we were not to employ neither mercury nor glass; the instrument must be small enough that it could be passed through a cystoscope; it must be very sensitive, and record small temperature changes immediately; and above all it was absolutely necessary that the instrument be used in rooms of varying temperatures and still retain a reading that could be pronounced standard. And, furthermore the readings must not be affected in any way by any voltage or volume of High Frequency Current which may be applied to the patient.

We have produced a little instrument which is simplicity in the extreme, conforms to all the requirements, and combines exactness beyond our fondest expectations. The sensitive unit is enclosed in a silver tube of $\frac{1}{8}$ inch diameter, and but the slightest change in warmth immediately causes a deflection of the galvanometer needle. By an ingenious method of combining a compensating lead wire, and by the adoption of the well known Wheatstone Zero Method, the dial of the instrument can be set at the desired temperature, and the physician, by



increasing or decreasing his Diathermy Current merely causes the needle to reach the Zero point—indicating that he has reached exactly the degree of heat desired.

Physicians are fast learning that they can reproduce results provided they can duplicate the amount of given heat for a certain length of time, and with this new instrument an assured fact we look forward to tremendous strides in Diathermy accomplishments in the near future. The little instrument, which we are calling the Fischer "Diathermo Indicator," and its use will prove an innovation in the art of applying Diathermy, and the problem is now passed directly back to the physician—it will be up to him to register his readings, and to prove beyond a shadow of doubt that duplication of results is easily possible.

Some of these instruments are already out in the field, and shortly many more will be placed in the hands of well known authorities throughout the country, and Fischer's Magazine will keep you in touch with progress made.

The Fischer "Diathermo Indicator," complete with two units will list at \$100.00. Deliveries in about 30 days.

Physiotherapeutic Lecture Course

By MEL R. WAGGONER, M. D.

Cedar Rapids, Iowa

To be given at

DETROIT, MICHIGAN, HOTEL WOLVERINE

August 25th to 30th

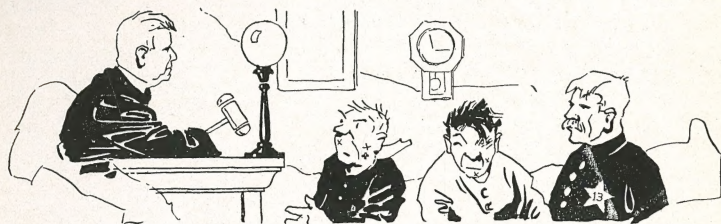
PERSONALLY CONDUCTED COURSES—CLINICS—LECTURES

For Details, Fee, etc., write

MEL R. WAGGONER, M.D., Cedar Rapids, Iowa

Courses will also be given subsequently at Milwaukee, Wis., Chicago, Ill., and New York, N. Y.

A PAGE OF FUN



Magistrate: "Can't this case be settled out of court?"

Mulligan: "Sure, sure; that's what we were trying to do, your honor, when the police interfered with us."

□ □ □

"Did Charles kiss you last night, Penelope?" asked a Boston mother.

"There was a slight labial juxtaposition as Charles departed, mother dear; but I assure you it was only momentary and therefore innocuous."

□ □ □

They were motoring. The talk ran to a discussion on vaccination. He thought vaccination on the arm the proper thing; on the other hand, she stated most emphatically that she didn't let the doctor vaccinate her where the scar would always show. To prove his contention, he rolled up his sleeve and showed that the scar had almost become invisible.

She then inquired: "Would you like to see where I was vaccinated?" He eagerly replied: "Yes, indeed."

"Well," said she, "keep your eyes open; we'll drive by there pretty soon."

□ □ □

She: "You know, dear, our guild has been trying to think of a way to help that poor Mrs. Smith, who is too proud to accept money?"

He: "Yes, darling."

She: "Well, today I thought of a lovely plan, and I mailed a check right out to her."

He: "How did you manage it?"

She: "Why, I simply wrote the poor woman a check and signed it 'Anonymous'."

□ □ □

Doctor: "And how is Mr. Sikes this morning? Has he had any lucid intervals?"

Mrs. Sikes: "No, doctor, he hasn't had a thing but what you ordered."

□ □ □

Student: "And poor Harry was killed by a revolving crane."

Englishwoman: "My word! What fierce birds you have in America."

IT is the quiet worker that succeeds. No one can do his best, or even do well, in the midst of badinage or worry or nagging. Therefore, if you work, work as cheerily as you can. If you do not work, do not put even a straw in the way of others. There are rocks and pebbles and holes and plenty of obstructions. It is the pleasant word, the hearty word, that helps.