

Program for Our
**Monthly Physiotherapeutic
Meeting**

Monday, April 13th, 1925

S. J. McNEILL, M. D., Chicago, Illinois

"The Treatment of Simple Goitre with a
Combination of High Frequency and Re-
sublimated Iodine"

10:00 to 11:00 A. M.

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

"Principles and Application of Electro-
coagulation"

11:00 to 12:00 A. M.

HARRY M. THOMETZ, M. D., Chicago, Illinois

"Tonsils"—Clinic

2 to 3:30 P. M.

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 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.

Dr. Thometz will perform the ac-
tual tonsil operations—removal by
Surgical Diathermy—on several pa-
tients who have been secured for
this clinic.

Physicians and surgeons are cor-
dially invited to attend throughout
the session or during those periods
covering subjects in which they are
especially interested.

In addition to the lectures, each
speaker will be glad to answer any
questions in connection with your
own physiotherapeutic problems.

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FISCHER'S MAGAZINE



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366

MARCH, 1925

"THE MEETING OF THE
MINDS OF MEN HAS BEEN
RESPONSIBLE FOR NEARLY
ALL THE PROGRESS THAT
HAS BEEN MADE SINCE
THE WORLD BEGAN."

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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Exchanging Ideas

When you're trading in ideas, the ordinary rules of barter and exchange do not apply.

You see, if you have a car, let us say, and some other Doctor has a car, and you exchange cars, you will each have one car after the transaction is completed. That's a regulation exchange, and comes under the rules.

But if you have an idea that is of real value to others, and some other Doctor has another valuable idea, and you exchange ideas—you will each have *two ideas!* For you can give away an idea without depleting your own supply, and in such an exchange, both parties benefit.

However, this isn't an editorial on economics. The point I want to make is, that Fischer's Magazine offers a medium for the exchange of ideas on Physiotherapy. And you, Doctor, are cordially invited to use this medium.

If you have used Diathermy, either Medical or Surgical, in a new or interesting or conclusive way, let us have the news. Send us the case reports, and your own observations and deductions.

Out of the many thousands of readers of this periodical, beyond question there are hundreds to whom your message will be of the utmost interest. Give all the details of your technique; next week or next month, some other physician or surgeon with an exactly similar case will call you blessed!

Diathermy in Dislocations

By B. T. GREEN, M.D., Brookings, S. Dakota

Treatment by diathermy with correct technique gives the patient no electrical effects. He has the sensation of heat and heat only. Treatment by this modality must not be considered from any other standpoint than heat, and it must be used only when heat is therapeutically indicated. By governing heat production, accurately localizing its action in the tissues, controlling its effects, and timing its application, simple heat has a very large field in therapy. The production of heat in the tissues is explained by well-known physical law. The d'Arsonval current, with its low measurable amperage and high controllable voltage, is bipolar with the tissues under treatment completing the circuit. The current meeting the resistance of the tissues through which it passes is transformed into heat. The heat is formed in the tissues and nowhere else, because it is there and there only that the current meets sufficient resistance to make this transformation. This heat may be localized at the will of the operator by the size, shape, and relative position of the electrodes in contact with the tissues. In this way heat is accurately localized in almost any tissue, whether deep or superficial, while the quantity and intensity of the heat production may be accurately governed by the operator through the generator controls. Heat so produced must necessarily be within physiological limits to have physiological effects.

The therapeutic value of heat so produced and localized in pathological tissue is explained by reactions. It produces an arterial hyperemia, increasing nutrition to the part; dilates capillary, venous, and lymph channels, increasing drainage and favoring osmosis; the high degree of heat inhibits bacterial growth and increases phagocytosis; fibrosed areas are softened, the inflammatory tissue dissolved, and the debris eliminated; pain is relieved because pressure is removed. The end-result is repair of the diseased tissue under treatment.

This may be made clearer by citing an illustrative case:

A woman, aged 30, with the following history of injury; accidental dislocation of the left elbow twelve hours previously. Dislocation was reduced soon after the accident, and hot wet compresses applied. The X-ray did not show fracture of bone or bony prominences. The bones of the elbow joint were in good position. Tissues about the joint were extremely swollen. Redness and ecchymotic discoloration. The patient complained of severe pain in the vicinity of the joint, the pain extending to the hand and shoulder.

Treatment: Apparatus, a resonant transformer producing d'Arsonval current, amperage up to three amperes, and voltage up to 30,000, equipped with a hot wire milliamperemeter, an accurate voltage control, and finely adjustable spark gap, connecting cords and suitable electrodes.

The arm is bared and painted with soap lather above and below the injured joint. Block-tin electrodes one inch wide and twelve inches long are applied, encircling the arm six inches above and six inches below the elbow. These electrodes are held in place by lightly applied woven elastic bandages. Flat metal tips on the conducting cords are placed in contact with the block-tin electrodes and held in place beneath the elastic bandages. The conducting cords are attached to the d'Arsonval binding posts. The high tension switch is open and all controls on lowest points, spark gap is closed. All connections are quickly inspected and the high-tension switch closed. The spark gap is now slowly opened and the needle of the milliamperemeter watched. If necessary, the volt switch is advanced. About five minutes will be required to reach the desired amperage, which in this case is 800 to 1,000 milliamperes, depending upon the heat sensation experienced by the patient. A feeling of distinct warmth is all that is allowed. Continue the treatment for about thirty minutes. Observe that the skin between the electrodes is warmed and reddened and that the swelling about the elbow is slightly increased. The patient has already volunteered the information that the pain is greatly relieved.

To stop the treatment reverse the steps as outlined in beginning treatment. When the bandages and electrodes are removed the arm is moved much more freely and with less pain than

before treatment. Cover the arm with cotton, bandage, and adjust to an ordinary sling.

Pain will probably return in four to eight hours but with less severity. Two treatments should be given daily for two or three days, then less frequently, depending upon the pathology and the resulting reactions. After the first few days the arm should be massaged gently and the elbow given motion within the limits of pain. Keep under observation. If there is limitation of motion give similar treatments for the softening and absorption of fibrosis.

Here the diagnosis was clear, the pathology known, the specific treatment clearly indicated and rationally applied with results positive. Nature's inflammatory reactions were imitated and intensified within physiological limits resulting in hastened repair.

(Reprinted from The Journal-Lancet)

Physiotherapy in General Practice

By J. G. WALSH, M.D., Woodbine, Iowa

Physiotherapy and roentgenotherapy fill a place formerly much neglected in medical practice. They give us something definite to offer chronic cases which formerly we hated to see come back to us. For instance, old cases of chronic constipation and auto-intoxication were drugged with this and that and in exasperation one sometimes thought of dynamite, but now by the judicious use of the Morse wave generator we have something positive in therapy. With a large pad in the back and one in front (using the three positions over the ascending, transverse and descending colon) and using an alternating current brought up to the patient's tolerance, ten minutes in each position, we treat them every other day and give a lubricating oil at night. In a short time the bowels begin to move regularly and the patient shows a general buoyant poise. The treatment with this current helps to restore tone in lax abdominal walls.

Another class of cases with which we have to deal are cases

of high blood pressure and hypertension. By a judicious regulation of diet and autocondensation supplemented by sweats a marked improvement in general health will result. These cases when complicated by nephritis or a sluggish liver are benefited by diathermy to these parts. The improvement is brought about by improving the circulation and by bringing fresh blood to the parts and increasing the catabolism markedly.

Diathermy helps catarrhal deafness and is also a benefit in rheumatism, arthritis, neuralgia, etc. Some men are using it in pneumonia and its action is claimed to be almost specific.

Do not forget the use of fulguration or electrocoagulation in the removal of warts, moles, superficial growths, epithelioma, cancer, etc.

The actinic ray, both air cooled and water cooled lamps, I think, is the best of the various modalities. In cases of aneuria the improvement is marked. I recall a case of pulmonary and tuberculous peritonitis in a girl of 19 years. She had an afternoon temperature of 101, a pulse of 110 and was generally run down. I used fractional radiation following the scheme of the Rollier treatment. There was a general improvement in her condition and she gained 20 pounds in weight and her temperature and pulse returned to normal in about two months.

I used the air cooled lamp in a case of pustular acne and secured remarkable results. The skin was one solid mass of lesions but it cleared up in five weeks under alternately daily treatments. The lamp is also indicated in eczema, scabies, impetigo, pruritis and almost any itching condition of the skin.

The X-ray, of course, is of benefit in diagnosis and in fractures and it is curative in hypertrophied and suppurative tonsils, cervical adenitis, simple and exophthalmic goiter.

Another phase of the subject which is most important to the physician is that this work is practically all office work. This, I think, is one of the big advantages in physiotherapy.

(Reprinted from Journal of Radiology)

Electrocoagulation vs. Tonsillectomy

By L. B. WILLIAMS, M.D., Toronto, Canada

The tonsil question of the past is but a forerunner of the greater question of the future, to-wit, instilling health into throats. This has many phases, each ample for the subject matter of a brief article. There is little analogy between the child's and adult's throat and so sane therapy will vary. In the adult the many vagaries of throats, through disease, are only too apparent to the trained observer who is looking at throats instead of tonsils. This is the reason for the tonsillectomy of the past and the electrocoagulation, instead, for the future. Success and safety are the hinges upon which successful therapy must swing. The writer, as an operator, has had ample opportunity to be familiar with both phases of throat therapy in question, has abandoned tonsillectomy entirely, but in passing, is not unmindful of the good it has accomplished in the march of progress.

Let us take a really serious hypothetical case. A hemophyllic woman, aged 58, very obese, myocardial heart, extremely nervous, throat much congested, tonsils as bad in any way as you have seen or may imagine, and merged into the anterior pillars, uvula dragging on tongue and palate tremulous, thickened pharyngeal mucous membrane, etc. That patient is typically assured of success and also of safety with electrocoagulation, whereas, I believe, any responsible operator would hesitate to subject her to tonsillectomy. If electrocoagulation meets the requirements of this case, it meets the reasonable everyday contingencies.

I would like to emphasize how, in electrocoagulation, one can effect the whole treatment of a throat. The throat is satisfactorily controlled under topical and injected local anesthesia and in high frequency current from a special electrode, a careful adjustment of voltage and amperage, depending upon requirements, is a requisite of the technique.

As an end result I like to see about one-half a normal intact

tonsil remaining. There are many reasons why such should remain, but I know of none why the whole tonsil should disappear, although this is easily enough accomplished. I will argue only one of many points; take infection. In tonsillectomy you only effect as far as you go and that is why, unfortunately, the operator may get too deep—he wants to be thorough. In electrocoagulation your effect reaches far beyond the tonsil, from destruction at your point of operation to a radiating, gradually lessening effect, becoming a vanishing stimulation deeper in the throat tissues. The electric current is not sent in but drawn out of the patient.

This intentional inflammatory reaction in the deeper tissues under Nature's resolution make this tissue, of whatever character, much improved metabolically for the rest of life. How often a trained high soprano voice, following tonsillectomy becomes contralto in character on account of subsequent flaccidity of the throat. The opposite is true, invariably, by the other method. There is no opposing this view because we all know of such. When you examine a throat treated by electrocoagulation, notice what real lifelike physiological looking tonsil tissue it is, that the pharyngeal wall is uninjured and no "dug outs," that the tonsil capsule is intact, accounting for the tautness of the throat, as verified by the patient's remark that "my throat feels more natural and elastic than for a long time." Read this last sentence over again; it is the end result of every day trained electrotherapy. Let your memory ruminate on some of the conditions you have observed following tonsillectomy.

I cannot here go into technique, but if you are contemplating such work, endeavor first to be an observer. If that is not feasible, familiarize yourself on minor operations, such as moles, piles, epitheliomas, etc., first, then try some effect on one tonsil, and so feel your way to safety and efficiency. There is considerable fulness (not pain) from physiological inflammatory reaction following the work, particularly if different parts of the throat, as suggested above, are all treated at the one sitting, and if tissues are much fibrosed.

An ordinary case feels inconvenience for three or four days, but is up and around all the time. I need not here emphasize the dangers, such as narcosis spreading infection, haemorrhage and the like, that are not visionary in tonsillectomy; but can say that we have avoided it all.

In childhood the amount of lymphoid tissue effected by tonsillectomy is but a very small fraction of the sum total of the region, none of which is bad enough to require removal but all of which requires betterment. We have the means today, without any operative procedure, of normalizing such tissue in the child's throat. In the adult throat where often the lymphoid character of a tonsil has become largely fibrous connective tissue, associated with many other local undesirable conditions, while constitutionally the patient may be a real risk, here any treatment whose possibilities are inefficient and whose inherent character has untoward possibilities ought not to be advanced in the face of what is much more efficient and without major risk; namely, experienced electrocoagulation.

Diathermy in Pulmonary Tuberculosis

By BURTON B. GROTES, M.D., Colorado Springs, Colo.

Dr. Grover, in the Medical Herald and Physiotherapist, says he has not used this method for a sufficient length of time, nor in a sufficiently large number of cases, to be able to assert that it is, in itself, a cure for the disease; but he is assured from experience that the method is of great value, and possibly, with greater experience and improved technique, it will be found to be of inestimable service, thus taking its place amongst the recognized methods of treatment of pulmonary tuberculosis.

Diathermy, or heat-penetration, causes a rise in temperature of the tissues through which the current is passing. The heat is generated in the tissues themselves by the passage of the current. The rise in temperature occurs in the body as a whole, owing to the heated circulating blood, and can be measured by the clinical thermometer. But the parts lying between the two electrodes reach the highest temperature. Coincident with this

rise in temperature is engorgement of the parts with blood owing to dilatation of the capillaries. No doubt the rise in temperature is in itself beneficial. By subjecting the bacillus to a temperature several degrees above blood-heat, at which it thrives best, it is inhibited in its growth, if not destroyed. The "warming up" of the tissues, with increased blood and lymph flow, favors phagocytosis—another element in the curative process. Metabolism is quickened, and the elimination of toxins is increased. Finally, no doubt, the passage of the current through the body sets up some reaction which stimulates and increases the natural defensive processes of the body against disease.

Metal electrodes of the required size and shape—generally sheet tin, which is easily cut and moulded—with a number of thicknesses of lint or domette, wrung out of hot saline solution, intervening, are fixed firmly and evenly in position on the patient's chest. One is usually placed in front and the other behind, and their positions varied from time to time so that even heating of as large an area as is required can be performed at the one sitting. The condenser couch may form one electrode. One electrode, the positive or active, is made smaller than the other. Even application is important so as to avoid undue heating at any particular point. Treatment is carried out with the patient in the recumbent position. The current is gradually increased so as to give the subcutaneous tissues time to warm up, otherwise the skin may become unduly hot before they have reached the temperature required. The seance varies from fifteen to thirty minutes, or even longer, being increased as the sittings proceed. Seances are given daily at first, and then alternate days, and finally twice weekly. The total length of time required depends upon the extent of the disease and the progress of the patient.

Immediate improvement and amelioration of symptoms are usually found; catarrhal signs rapidly clear up, sputum is diminished, and cough abates. In a successful case most symptoms will have disappeared in a few weeks. The patient feels better, appetite returns, and weight is gained. The temperature gradually becomes normal in its variations.

New Schedule of Waggoner Physiotherapeutic Clinics and Lecture Courses

By Mel R. Waggoner, M. D., Cedar Rapids, Iowa

Doctors who are keeping pace with the development of physiotherapy will find these lectures and clinics a most valuable source of new information and up-to-date practices.

Classes for the Coming Season Follow:

Atlanta, Georgia	- - - - -	March 16th to 21st
	(Piedmont Hotel)	
Charlotte, North Carolina	- - - - -	March 23rd to 28th
	(Charlotte Hotel)	
Memphis, Tennessee	- - - - -	April 6th to 11th
	(Chisca Hotel)	
New Orleans, Louisiana	- - - - -	April 13th to 18th
	(Roosevelt Hotel)	
Dallas, Texas	- - - - -	April 20th to 25th
	(Adolphus Hotel)	
Monroe, Louisiana	- - - - -	April 27th to May 2nd
	(Hotel Monroe)	
Indianapolis, Indiana	- - - - -	May 11th to 16th
	(Claypool Hotel)	
Detroit, Michigan	- - - - -	May 18th to 23rd
	(Wolverine Hotel)	
Pittsburgh, Pennsylvania	- - - - -	May 25th to 30th
	(Wm. Penn Hotel)	

Personally conducted Clinics, Courses, Lectures

For Full Information as to Detail of Courses, Fee, etc.,
Write the Secretary of the Waggoner Lecture Courses, at

1664 North Claremont Avenue
Chicago, Illinois

A Physio-Therapeutic Week in Kansas City

The Seventh Session of the Western School of Physiotherapy will be held in Kansas City April 9th to 17th, 1925. Every student will do actual work in each modality under a competent instructor. There will also be clinics at the General Hospital. Physicians are invited to bring interesting cases for diagnosis and treatment. Such cases will be hospitalized free of charge until operation is completed.

The Seventh Annual Meeting of the Western Physiotherapy Association will follow on April 16th and 17th. Papers will be read by: Frederick H. Morse, M. D.; Gustav Kolischer, M. D.; Miles J. Breuer, M. D.; J. B. Myers, M. D.; Lynne B. Greene, M. D.; A. David Willmoth, M. D.; E. C. Henry, M. D.; Byron Sprague Price, M. D.; Burton B. Grover, M. D.; T. Howard Plank, M. D.; W. B. Chapman, M. D.

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Some Job

Getting out a magazine is no picnic.
If we print jokes, folks say we are silly.
If we don't, they say we are too serious.
If we publish original matter, they say we lack variety.
If we publish things from other papers, we are too lazy to write.

If we stay on the job, we ought to be out rustling news.
If we are rustling news, we are not attending to business in our own department.

If we don't print contributions, we don't show proper appreciation. If we do print them, the paper is filled with junk.

Like as not some fellow will say we swiped this from another magazine.

So we did ———

From the N. C. R. News.

Alopecia

By MILES J. BREUER, M.D., Lincoln, Nebraska

There are a number of classes of alopecia, some of which respond very readily to physiotherapy, and others of which do not respond at all. Before trying physiotherapy in a given case, it is wise to make an attempt to estimate whether or not the treatment has at least some hope of being successful.

First of all, in an individual case of alopecia it is necessary to consider the question of syphilis. Syphilitic alopecia will not respond to physiotherapy alone; specific treatment is essential. In this connection it is well to remember that a negative Wasserman does not prove the absence of syphilis; a thorough clinical investigation of the case is necessary.

Secondly, there are cases of bald-headedness in which the condition has existed for many years, and in which a careful history will reveal the fact that hair-root atrophy must have taken place many years ago, and that nothing short of a miracle can possibly restore your patient's hair. It is only when hair roots remain but are inactive that physiotherapy holds out any promise to the patient of a new crop of hair. Furthermore, in these cases in which no hair roots are left, a careful examination of the scalp will reveal an atrophic glassy condition of the skin with an absence of pore openings, which is an almost certain indication that there are no more hair roots, and that any kind of treatment is hopeless.

On the other hand, cases in which the hair is lost following a severe infection, such as measles or typhoid fever, are very favorable for physiotherapy, and some results of an astonishing nature can be obtained. A careful history is the most important thing to consider in these cases.

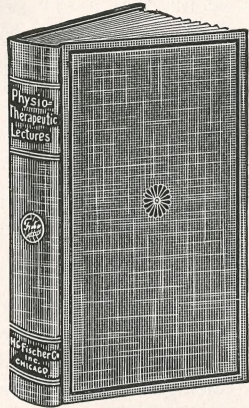
CASE 1: Girl, 17 years old, whose head was completely bald ever since an attack of measles four years previous. She had taken "electric treatments" some time before, which, as far as I can gather, consisted of sparks from a high frequency vacuum electrode. She had also used every possible lotion and salve, and had been the rounds of a number of physicians.

A complete and thorough physical examination was negative; she was in robust health. The treatment I gave her consisted of exposures to the ultra-violet air-cooled lamp at a long distance (24 to 30 inches) for the purpose of getting the long wave lengths. Moderate reaction was secured at every second day. Within two weeks white lanugo hairs appeared. In six months she had a full head of hair and was attending social functions as usual. This was two years ago. At the present time she has a normal head of hair. She has occasionally lost some from a patch or two, but this has yielded readily to a few exposures from the actino ray.

CASE 2: Attorney, aged 35. In the best of physical health; physical examination negative. Had been bald-headed for a number of years. Scalp was not glassy and atrophic, but had the appearance of normal skin anywhere on the body, with visible pore openings. He was advised that actinotherapy might hold out some hope for him, but no definite promise made. He was willing to try it for what it was worth. He persisted in these treatments for almost a year. Lanugo hair appeared in a number of weeks, and in three or four months the scalp which had been bald for so many years was thinly covered with long, fine hair. At the present time the treatment is being continued, and the hair that is present is increasing both in density of growth and in size and thickness of individual hairs.

The aim of the treatment is to increase the nutrition of the scalp. For this reason the long wave lengths of actinic light are used, as they are the biologically synergistic waves. And for this reason frequent and moderate reactions should be secured from the exposures. After a long period of continuous treatment, the scalp loses its sensitiveness to the actinic light, and it is difficult to obtain a good reaction. When this occurs, the sensitiveness and the amount of reaction can be increased by the following methods: (a) a rest of three or four weeks; (b) precede the actinic exposure by an exposure under the deep therapy light, of about 30 minutes; (c) precede the actinic exposure by about 10 minutes of short, thin sparks from the glass high-frequency electrode all over the scalp.

New Books



Physiotherapeutic Lectures

Reports of Lectures and Clinics given at the Third Annual Physiotherapeutic Meeting held at Logan Square Masonic Temple, October 20th to 24th, 1924. Some 700 pages of Diathermy, Quartz Light, X-ray. Limited edition of 1,500 will soon be exhausted. If interested, send your reservation on the enclosed card. Price, \$9.00.

Genito-Urinary Diseases

Corbus and O'Connor

Diathermy in the treatment of genito-urinary diseases in both sexes. Medical and surgical methods of its application to these diseases given in detail. Represents over five years of study and practice of the methods described.

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A. M. A. Meeting Plans Perfected

Atlantic City has always proved to be a popular place for the annual conventions of the American Medical Association, and from present indications, the 1925 session which meets May 25-29 will be no exception.

Convention headquarters, scientific exhibits, technical exhibits and certain meetings will all be housed in the steel pier at the Boardwalk and Virginia Avenue. The general effect will be similar to that of last year's Convention held on the Municipal Pier in Chicago. This was unanimously voted the most successful and popular of all A. M. A. Conventions.

The meetings of the various scientific sections will this year be particularly convenient to the headquarters. None of the hotels in which the sections will convene are more than two blocks from the Pier. Thus, the entire Convention will be compact and convenient. In the headquarters or registration section, there will be a splendid opportunity to meet friends and acquaintances. In the technical exhibits, the physician can come in direct contact with the foremost purveyors of products needed in the practice of medicine.

Those interested in electrotherapy will find the Convention particularly stimulating. Papers and discussions of important physiotherapy topics will be presented in the scientific sections. Most of the leading firms will have ample exhibits and their best technicians present to explain and demonstrate. The unusual opportunity of meeting such an array of physiotherapy equipment under one roof is realized when one reflects on the physical impossibility of the manufacturers' salesmen bringing to the physician's office even one piece of apparatus for demonstration. Here in Exhibit Hall will be truckloads of the most modern equipment.

The scientific exhibits which were so popular at Chicago last year will be of the same high standard. A motion picture theater, with a seating capacity of 1200, will run a continuous program of lectures and demonstrations in connection with appropriate films and slides.

Fibromata

By J. U. GIESY, M.D., Salt Lake City, Utah

Some time ago, I wrote of Galvanism in a general way, and promised to follow on with a consideration of various applications of this current to specific treatment of concrete types of disease. This is the first effort to redeem that promise and convey to the minds of those who are using this electric modality, as well as those who are not, some of the exceedingly useful applications which may be made.

Bear in mind, if you will, what I said in that other paper about the current itself. It is uni-directional, with two definite poles, negative and positive. These are definitely permanent in their characteristics. On this depends the usefulness of this current in a major extent. All of galvanic ionization depends upon it. The Positive is acid. It is a vaso constrictor. It hardens tissues. It checks inflammation and pain. The Negative is alkaline. It softens tissues and dilates blood vessels. It breaks down tissues. It irritates. The Positive will check hemorrhage. The Negative will incite it or is apt to do so. The Positive will ionize metals. The Negative will ionize acids and halogens.

Very well, then to our subject: Fibromata. You've met them, and meeting them what do they suggest? Surgery? Yes. Radium? Yes, also. Galvanism? Have you ever thought it applied? Whether you have or not, I want to say now and here that it does. Surgery, removes the uterus or the growth. Radium, checks hemorrhage, causes the fibroid to regress and stops menstruation and induces an artificial menopause a great many times. Surgery does the same thing also to a large extent—that is, it removes the uterus and the woman doesn't menstruate as a matter of course.

Galvanism does not do this thing. Yet it will cause the fibroma to regress to absolute disappearance a great many times. With me it is a measure always of first choice. If it doesn't

work, and I've seen it fail so seldom as to be negligible—then you have surgery or radium as a latter choice.

Here is the technic. Put your patient on a table in the ordinary position for a gynecological examination. Sterilize a vaginal speculum and a small intrauterine galvanic sound. I use one of pure silver with a small ball tip. Expose the cervix and gently insert the sound as nearly to the fundus as you can. Place an indifferent electrode (the negative in this case) anywhere you like—over abdomen or over lumbar spine. Connect the sound to the positive pole of your machine. Gradually turn on ten, fifteen, twenty, thirty, forty milliamperes of current. Forty will generally be enough and about all the patient will stand. Run for from ten minutes at first to twenty minutes later as the patient accustoms herself to the treatment. Treat every other day until bleeding has stopped, if there was bleeding to begin with, as generally occurs, since it is usually hemorrhage that brings you the patient first. When bleeding has stopped change your sound to one tipped with pure copper. Dip this into ten per cent sulphuric acid and then into pure metallic mercury and rub the mercury to a smooth surface. Insert this and proceed as before. The mercury ionizes. You must amalgamate your sound for each treatment. But—that's all there is to it. And it works. It isn't guesswork. Massey and Kellogg did it thirty years ago. Curran Pope, of Louisville, is doing it and has been doing it for thirty years. I have been doing it for eighteen years myself. And I have patients with whom I have kept in touch since the first, who have remained without symptoms all that time—women below the climacteric who have menstruated, after the treatment, who have not been thrown into a premature menopause. It is amazing and delightful to see them come in frightened, bleeding, almost exsanguinated at times and then to see them gain, grow back to a renewed life and health and enjoyment of existence. If you haven't tried it—try it. It's worth while. The results you get will give you a real thrill of accomplishment, at least the few first times you get them. After that you will not be surprised.

A Plea for Galvanism

By FREDERICK, H. MORSE, M. D.

Boston, Mass.

A very large proportion of the users of physical and electrical methods with standardized equipment are woefully deficient in their knowledge of the physics of the direct current. There is nothing new that is not already known about this fundamental electric force, commonly spoken of in medical literature as "galvanism."

Since the discovery of X-ray therapy, high frequency in its many manifestations, light therapy, the action of static electricity, and the use of mechanical vibration and massage there is, and likely to be for a long time to come, a great diversity of opinion of the physiological action and consequent therapeutic usefulness of the methods mentioned.

The direct current, however, has certain well-known physiological and chemical actions and reactions on animal tissue that alone can apply to it. The author, who has spent many years of his professional life in the use and study of the direct current, is often pained to see physicians in high standing with well equipped offices doing excellent work and practically ignoring an agent capable of doing so much definite and really scientific work. Therefore, the writer is making a plea for a more extended use of a form of treatment that nearly everyone has at hand who makes any pretension of physio-therapy.

The current in question always works noiselessly and many times with but little sensation and perhaps is not spectacular and psychic in its effects as compared with the static, high frequency, and ultra-violet, and the class of physicians to whom the above might apply will find no advantage or perhaps even interest in reading this appeal. The majority of medical men, however, are desirous of knowing the why and how, and when once attained, the technic is simplified and results more pleasing because of understanding the principles behind it all.

Textbooks on nervous diseases, gynecology, and sections of medical literature containing a description of means for the relief of symptoms usually speak of electricity, sometimes definitely enough to use the word "galvanism," without regard to polarity, milliamperage, motor nerve points, and other essentials, as one of the methods that might be employed. They attach as much importance to the technic as they would in ordering the use of a hot water bottle, a mustard plaster, or some useless liniment.

To be honest with one's self and in justice to a patient the direct current should be used with as much discretion, care and intelligence as one would in prescribing digitalis, strychnia, opium, and the like, which are supposed to have a definite action.

A little concentrated study on electro-physics and one can easily become familiar with the prominent physiological and chemical actions insuring efficiency in its application just in proportion as one will watch and study the effects obtained.

It is not necessary to repeat here the special action of the positive and negative poles, the sedative effect of the one and the stimulating action of the other, or just when to apply the current for relief of pain or the improvement of local nutrition. That will come with an understanding of its tissue effects and perusal of textbooks on the subject.

Electrolysis chemically and cataphoresis mechanically alters the amount and distribution of salts necessary to the proper nutrition and function of the various parts of the living organism. By the latter there is a direct transference of the fluids and salts by way of the cell walls, muscle septa, coats of blood vessels, sheaths of nerves, skin, serous and mucous membranes; in fact, all animal membranes which from the physical point of view are all the very best kind of porous diaphragms. Primarily, this action takes place throughout the tissues interposed between the electrodes (not necessarily the nearest way, but along the path of best condition), but secondarily its influence is felt beyond the interpolar region.

The usual source of energy of the direct current is from the commercial supply of 110 volt, and where the alternating

current is the only one available a rectifier is necessary to transform it into the direct current. For fine electrolysis, like the removal of hairs and treatment of small growths where the needle is to be used and where pure electrolysis only is needed, the street current is not the best for the purpose. The original battery formation of cells of low amperage and large milliamperage is best for this work.

Apparatus so constructed that there can be a great variation of amperage and voltage simplifies applications because of the ability to overcome the sometimes objectionable feature of burning sensation (skin resistance).

The subject of contact in all electrical applications is of great consequence not only as far as the therapeutic effects to be obtained but the tolerance and comfort of the patient as well. This is nowhere more important than in the use of the galvanic current where perfect contact in both wires and electrodes is *absolutely* essential.

But with the same intelligent care as one should exercise in doing any operation on the body, surgical or mechanical, the exactitude of action and results obtained justify the pains taken.

(Reprinted from *The American Journal of Physical Therapy*, September, 1924)

Diathermia Treatment of the Female Breast

Vey, in the *Zentralblatt für Gynäkologie*, says close contact of the electrodes to the skin may be secured by suitable size of the plates and by conforming them to the precise shape of the breast. The result of the treatment is increased circulation locally and enlargement of the organ. Abundant secretion of milk takes place at once, ascribable to increased capacity for secretion. It is often observed that the birth occurs several days earlier on account of this treatment.

Electrolysis in the Treatment of Nevi in the Newborn

Mahar, in the *Bulletin Officiel de la Société Française d'Electrothérapie et de Radiologie*, for many years, has employed radiotherapy and electrolysis concurrently in treating facial angioma in very young infants. He has also inspected the result in a certain number of infants from whom Alber Weill, his predecessor at the Hospital Trousseau, had removed angiomata with the X-ray several years earlier. The comparison of results he considers decidedly favorable to electrolysis.

The radiotherapeutic method employed was not that of deep raying. Before the war he used bimonthly applications from water-cooled tubes with a current of one and a half to two milliamperes and a 15 or 16 centimetre spark and aluminum filter of one or two millimetres. Since the war a Coolidge tube with a twenty-two centimetre spark, the same current, and a four or six millimetre aluminum filter. With such doses relief is not to be expected in small nevi short of five or six treatments. Not many disappeared completely; traces were almost always visible long after.

The difficulty of keeping the child quiet, that of localizing the treatment properly, the number of applications necessary, and the uncertainty of result are all grounds for preferring electrolysis. The author now uses only the latter. At the first sitting he tries to reach the large nutrient arteries which feed the nevus. When these are sclerosed, the tumor ceases to grow and portions of its surface lose color. Fifteen days or two months later the platinum needle impales the remaining vessels of size and complete blanching follows. When fine needles are employed and no stronger current than two to four milliamperes, the marks on the skin are small and little by little become invisible.

(From *The American Journal of Physical Therapy*, Jan., 1925)

Monthly Meeting, Monday, April 13th.

See Back Cover Page for Full Details

Electro-Coagulation of Tonsils

By B. C. ROSE, M. D.

To one who has witnessed a tonsillectomy by surgical means either under local or general anesthetic, the electro-coagulation method of treatment will prove well worth investigating. There is growing reluctance toward surgical removal because surgical tonsillectomy done under general or local anesthetic is near a major procedure and a major risk.

It is difficult and almost impossible to remove or even reduce tonsils by the electrical method in children under twelve years of age. They are too young to understand what we are about and consequently will not hold the mouth open nor the tongue down and can not be kept under sufficient control during the operation.

The best subjects as stated are above twelve years of age. A local or general anesthetic is not necessary. Begin with 500 milliamperes of Diathermy current, apply the jump spark holding the needle at close distance to the tonsil, produce a pin point blanch and do not leave the point of coagulation but work away in every direction from that point. The gradual coagulation produces anesthesia. If the tonsil is hard and fibrous then step up the current if necessary.

It makes no difference what type of tonsil we are dealing with in applying electro-coagulation—whether simple hypertrophy, the repeatedly infected inflamed tonsil, those badly diseased and abscessed, the malignant sarcomatous or carcinomatous type, or whether acute or chronic—the prognosis is one and the same. There is no loss of blood, no need of haemostatics, no spread of infection for the simple reason the tonsil is blanched, cooked and charred if you like.

Hospitalization of the patient is not necessary and there is no preparation of the throat, such as sterilization, needed. The electric current destroys the bacteria in the tonsil tissue and penetrates the crypts and follicles better than any antiseptic known to medical science.

I repeat—it is a bloodless operation—can be done in the office and without an anesthetic if but little patience is acquired

by both patient and operator. But if deemed necessary, we would recommend any good, reputable local anesthetic which has little toxic effect. The anesthetic should be injected into the tonsil and peritonsillar tissues.

The small machines should be satisfactory but my preference has been a large machine. The only articles needed other than the machine are a good pair of conducting cords that will not leak current through the insulation to the patient, a foot switch, a long cable capable of reaching the patient with ease that will carry the needle, a wooden tongue depressor made into the shape of a metal one.

If the tonsil is found located beneath the anterior pillar, a kind of hook retractor will be necessary for the assistant to hold the anterior pillar out of line and out of the way of the surgeon. The needle should be insulated to within one-fourth of an inch of the point.

My own technique or method is as follows: First gain the confidence of the patient by assuring him that there will be no pain other than a hot sensation after the first few applications of the jump spark. The patient is seated in front of the operator and near the machine, which is set on the Diathermy current to deliver 500 milliamperes; the patient holds an auto-condensation handle attached to one pole of the machine; the surgeon holds the needle handle which is connected to the other pole of the machine. Now, with a good wooden tongue depressor as described, a strong head light or mirror, the operation is begun. Bring the needle in close-up contact with the tonsil and step on the foot switch. A slight blanch, pin point size, will be observed on the tonsil; at the same time the patient will pull away from the operator. In a second or so the tongue depressor is again applied and the operation is repeated, and so on until complete coagulation is brought about. The hard, fibrous tonsil can be completely charred by the jump spark method in the hands of the careful operator without endangering the peritonsillar tissue or patient in the least. When the operation is completed the patient is told to go about his affairs and to fear no complications other than a slightly sore throat for a few days. More than one application may be necessary,

depending altogether on the amount of coagulation done and the condition of the tonsils previous to the operation. If the tonsil is soft and friable one application may suffice, if large, hard and fibrous, then more than one application may be necessary. Ten to 30 days should elapse between treatments, each time waiting the required number of days for the tonsil tissue to come away.

The actual working time is but a few minutes in most cases, although in some, much time may be required.

(Read before the Garrard County Medical Society February, 1925)

Technique in Typhoid Neuritis

By MILES J. BREUER, M.D., Lincoln, Nebraska

Neuritis following typhoid fever is an inflammation of the peripheral portion of the nerve. If there is only a moderate inflammation, the nerve will recover in from four to six weeks, bringing with it the recovery of nerve functions such as sensation and motion. If the inflammation is severe enough, it will destroy the nerve fibre; then there will have to be regeneration from the nerve-body in the spinal cord, and recovery of function will require from three months to a year.

Your reactions of degeneration will tell you the difference. If they are complete within ten days from the onset, it means degeneration of the nerve fiber. In such a case you have two jobs ahead of you:

1. Promote the nutrition of the nerve-sheath, so as to assist in the formation of a new fibre;
2. Keep the muscles from atrophying to an extent that would render them useless before the nerve regenerates.

The first is accomplished by diathermy and negative galvanism (from a battery, not from a mechanical source of current) along the course of the nerve from the spine to the end of the muscle. The second is accomplished by interrupted galvanism (three or four shocks a day) through the muscle from one end to the other. When regeneration has become fairly well established, use motor-point stimulation.

Do everything gently. There is danger of being too rough all through this procedure.

Galvanism In Stricture

(The following letter was written by Dr. Frederick H. Morse, of Boston, in response to an inquiry.)

"I will assume that Urethral Strictures are meant, but the same principle applies equally well to Asophageal and Rectal Strictures, also Stenosis of the Cervix. The operation is simple but must be definite in action and carefully performed because beyond a certain strength of galvanic current, when a bare electrode is applied to a mucous membrane, ulceration will result. On the other hand, a milliamperage up to a recognized point will cause only softening (electrolysis) just sufficient to bring about results.

"In Urethral Strictures a sound should be used that will just barely or not quite pass the Stricture. This is to determine the size or calibre of the electrode for the work to be accomplished. Of course, the negative pole must be the active one on the metal tipped electrode, most of which in the market are simple olive shaped tips and objectionable because of the shortness of the treating surface. . . .

"The current to be used should not be over 5 milliamperes and I usually use even less. It should be turned on gradually and allowed to remain in place 3 to 5 minutes, adding the positive moist electrode on the back. This procedure should not be repeated more often than once in ten days or longer. In the operation no force should be used as we depend on the galvanic current to accomplish the results. If successful, each following treatment will require larger and larger electrodes.

"Very truly yours,

"September 18, 1924.

F. H. MORSE."

Electrocoagulation in Freeing Pleural Adhesions

Herve in the *LaPresse Medicale* says that in the course of artificial pneumothorax, retraction of the lung may be caused by adhesions which it is very desirable to remove. For this purpose the author makes use of electrocoagulation. The electrode is introduced within the pleura at two neighboring points through an endoscope in order to avoid too large an opening in the serous membrane. The adhesions thus are destroyed under full view. In this way large irregular adhesions may be relieved, and also bands which interfere with the pulmonary movements.

(From Am. Journal of Physical Therapy, Jan., 1925)

"What Is Your Opinion of Fischer's Magazine?"

Several hundred readers answered that question last month in such kindly fashion that we are impelled to reproduce a few of their comments herewith. These are typical of all the answers, and to all our friends we wish to say, "Thank you!"

"I find your little magazine very helpful." — Howard D. Eaton, M. D., Los Angeles, Calif.

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"Magazine very helpful and always filed for reference." — E. B. Moynard, M. D., Chateau, Mont.

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"Fischer's Magazine is a real help." — W. D. Spoor, M. D., Schenectady, N. Y.

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"Interesting and useful magazine, appreciated." — L. J. Pankow, M. D., Sioux Falls, So. Dak.

□ □ □

"I find many valuable hints in Fischer's." — C. R. Fishel, M. D., Tacoma, Wash.

□ □ □

"Appreciate these magazines and literature." — Wm. O. Thomas, M. D., Clinton, Wis.

□ □ □

"We like the magazine very much and look for it every month." — John George O'Meara, M. D., Providence, R. I.

"It's a real Physio-Therapeutic primer." — A. L. Schneider M. D., Henderson, Nebr.

□ □ □

"Fischer's Magazine is very helpful in many diseases." — R. B. Miller, M. D., Louisville, Colo.

□ □ □

"Fischer's Magazine is very fine." — J. B. Moses, M. D., Crestline, Ohio.

□ □ □

"I find the magazine a great help." — W. C. Swain, M. D., Huntington, W. Va.

□ □ □

"Enjoy the little magazine very much." — William Martin, M. D., Atlantic City, N. J.

□ □ □

"Magazine interesting and instructive." — J. Sidney Easan, M. D., Coldwater, Miss.

□ □ □

"We use your little magazine constantly." — Edith F. Dowell, Librarian, Fifth Ave. Hospital, New York City, N. Y.

Fischer's Magazine is prepared for Physicians, and almost entirely by Physicians. From the start, we have taken the attitude that this publication is a forum, open to all and for the benefit of all. We want to meet *your* needs. So, if there is any subject on which you would like information and discussion, let us know and we will try to arrange for articles on that subject. Use the enclosed card, if you wish.

Physiotherapy an Adjunct to Orthopedic Surgery

J. E. M. THOMSON, M.D., F.A.C.S.
Lincoln, Nebr.

It will first be necessary for me to qualify my remarks by making it clear that we are forced to use physiotherapeutic measures in an extremely limited manner, because at the present time our hospital facilities give us no opportunity to use these measures on hospitalized cases except as they become ambulatory and can come to the office for these treatments. Therefore, the series of patients from which the study is made comprise strictly those that come under our office clinic.

From December 1, 1921, to December 1, 1922, a total of one hundred and ten patients were given two thousand three hundred and forty-seven physiotherapeutic treatments. This of course includes massage, baking, muscular training, exercise and mercury quartz lamp treatment, etc. This work is performed under our direction by our physiotherapist, Mrs. H. L. Johnson, who has had years of experience in taking care of these cases not only in civil life but in the army hospitals during the war.

There are a definite group of orthopedic cases in which physiotherapy is a tremendous adjunct in treating. The field of its usefulness is yet so young that we are scarcely able to comprehend its full value, and during the first few months of the establishment of this department in our clinic we viewed it with skepticism and doubt of its success, although we had long made use of a so-called massage nurse for a few cases. The growth of prestige of this work has been phenomenal, though we are always mindful of the fact that the accomplishment of the splendid results has been due to the fact that our physiotherapist is a thoroughly trained student of this field and brings her personality into full play in the management of these cases.

The methods employed in the physiotherapeutic treatment of orthopedic conditions are: massage, active and passive motion, muscular training (exercise), baking, packs (hot and cold),

incandescent electric light exposure (1500 d.c.) and actinic ray. Usually no one of these methods is employed alone, but the treatment includes a combination of these, as the case requires.

The class of orthopedic cases on which physiotherapy is employed includes fractures, arthritis and neuritis, osteomyelitis, burns, sprains, soft tissue injuries, open wounds, weakened extremities or backs due to injury, disease and disuse, and disability of the feet, flat feet, pronated feet, acute foot strain, metatarsalgia and anterior foot disturbances.

In considering the series of fracture cases of which there have been twenty-six during the past year have had treatment by physiotherapeutic measures. This method of treatment was of course not begun until the period of immobilization was over, that would bring the fractures into this department after the fourth to the eighth week, when they were either in a protective removable splint or had no apparatus on them whatever. The procedure usually followed for these conditions is first baking, massage, active and passive motion of the limb, and very often where there is unusual swelling and tenderness around the joints following these procedures, the mercury quartz lamp is used to stimulate the tissues in the region affected. Later exercises are used and muscular training where this is necessary. We believe that these measures shorten the period of disability and convalescence particularly in fractures that are near the joint. Second, that by the use of the actinic ray the joint effusion is controlled or retarded, and the tenderness associated with early passive motion is likewise retarded. The stimulation of circulation during this physiotherapeutic procedure aids greatly in absorbing the deep scar tissue and restoring muscular activities and balance to the extremity.

In fractures of the spine similar procedures are used, though the patient is continually in a removable cast or brace. By these methods the aching and soreness accompanying these backs for years after such an injury is markedly diminished. Two of the cases in our series of fractured spines, returned to work three months after the injury; this is an unusually short time after such an injury. Another one having had a bone graft operation had his period of convalescence markedly shortened.

Under the head of arthritis and neuritis there are forty cases. This series includes subdeltoid bursitis and sacroiliac conditions. These two diagnoses are considered together because their general therapeutic management is somewhat alike. Of course the arthritic conditions have a longer period of rest and immobilization usually before physiotherapy is begun, and the patients have a complete physical examination and all possible foci of infection are removed, and internal medication instituted as the case needs. We do not use physiotherapeutic measures until after the active process has been allayed and we wish to bring a return of function to the disused joint. Here the actinic ray properly applied has been of great aid in retarding the joint effusion when manipulative measures are applied. Massage and baking are of inestimable value in bringing these parts back to normal in these series of cases. The actinic ray was used on a certain number for its general stimulative effect on the patient, and was applied to the dorsal and ventral surfaces of the trunk in several instances. It was a great asset in controlling the effusion and swelling, and diminishing the pain in the joint and aiding in obtaining an ultimate cure of the condition.

There were five cases of acute post operative osteomyelitis treated by the actinic ray. This was purely an experimental procedure, and we are not of the opinion that our method had a particular influence on the outcome of the case, as we have other methods of treating this condition that bring about a speedy recovery.

There are four severe burns in this series. All of these were a third degree burn with deep ulcers and heavy keloid scarring. The actinic ray used with massage, baking, passive and active motion and exercises markedly softened the keloid formations, and caused rapid healing of the ulcers. Eight open conditions were treated with a fair degree of success. The virtue of physiotherapy in these conditions was purely from a stimulative standpoint and to retain as near normal function as possible after treatment ensued. One varicose ulcer of two years' standing, two and one-half inches in diameter, which

had not responded to usual methods of treatment, was healed by ten actinic ray applications.

Sprains of the extremities and back make up a large class of cases which respond most readily to the physiotherapy measures. And with this class of cases are the extensive soft tissue injuries with muscular tearing and extensive acidulation of blood in the tissues. Muscular training, exercises and massage are of tremendous value in the treatment of extremities and backs due to injury, disease, infantile paralysis, spastic conditions and disuse of habitual posture and occupation. It is difficult to outline the method used in these conditions as every case demands special consideration. These same methods of exercise, active and passive motion, and massage are of a vital help in the treatment of all other disabilities associated with pain that does not respond to ordinary corrective measures. The training and exercises instituted by one who understands this field with the help of stimulative measures and baking and massage, is a definite factor in relieving the aching and pain that go with certain cases of flat feet, pronated feet, acute strain, metatarsalgia and acute foot disturbances.

EDITOR'S NOTE—For additional data on the above subject, and particularly for information concerning the use of Diathermy (electrical heat), see *Diathermy in Dislocations*, by B. F. Green, M. D., on page two of this issue; also *Physiotherapy Treatment of Bone and Joint Injuries*, by R. W. Fouts, M. D., on page seventeen of FISCHER'S MAGAZINE for Nov., 1924.

For Physicians and Surgeons

Members of the Medical Profession who are interested in Diathermy will find the next regular Monthly Meeting and Clinic at 2335 Wabansia Avenue, Chicago, on Monday, April 13th, of special interest. Well-known speakers—actual demonstrations.

SEE BACK COVER PAGE FOR DETAILS



What Do You Do When a Growth Appears—

“Otherwise Inoperable”

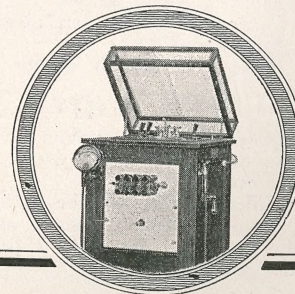
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A PAGE OF FUN

Mrs. Mutch: "I've been washing my diamonds all the morning in champagne. What do you do with yours when they're dirty?"

Mrs. Moore: "Throw 'em away."

□ □ □

"Wha' brand o' bacca are ye smokin', Jock?"

"I dinna ask him!"

□ □ □

"My God! You gave my wife arsenic instead of sleeping powder!"

"That's all right. You owe me 15 cents more."

□ □ □

This generation can drive automobiles, fly airplanes, talk by radio, and do many other things, but it is not quite so sure that it knows how to bring up children.

□ □ □

Paul: "Does your tooth still hurt?"

Albert: "I don't know."

Paul: "What do you mean by I don't know?"

Albert: "I left it at the dentist's."

□ □ □

Property Man (to villain): "Say, take those off. Those aren't your whiskers."

Villain: "What are they?"

Property Man: "They're one of the costumes for the Hawaiian chorus."

She had a vast amount of money, but it had come to her quite recently. One day an acquaintance asked her if she was fond of art.

"Fond of art!" she exclaimed. "Well, I should say I was! If I am ever in a city where there's an artery I never fail to visit it."

□ □ □

"I'm going to buy a dog."

"Bull?"

"No, really."

□ □ □

When we send things in a ship we call it a cargo and when we send them in a car we call it a shipment.

□ □ □

Jakie: "Ikey, you should put the curtains down when you kiss your wife. I saw you last night."

Ikey: "The joke's on you, Jakie. I wasn't home last night."

□ □ □



Prehistoric Surgeon: "Now, Miss Troglodyte, the anesthetic, please."

"THE LIGHTNING-SPARK OF IDEA, GENERATED IN ONE MIND, AWAKENS ITS EXPRESS LIKENESS IN ANOTHER MIND, IN A THOUSAND OTHER MINDS; AND ALL BLAZE TOGETHER IN COMBINED FIRE."

—THOMAS CARLYLE