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Original Contributions.

CHRISTIAN SCIENCE AND MORTAL MIND.

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IN one of my articles on Christian Science, published in your Journal, I expressed the opinion that the believers in "Science and Health, with Key to the Scriptures," had become incapable of reasoning, that they had, in fact, become hypnotized by poring over the contents of the book, in an endeavor to understand its meaning.

In reading to-day in the December number of *The Fortnightly Review*, an article entitled, "Christian Science and Mortal Mind," by Mrs. Stobart, I find the same opinion expressed. In the beginning of the article Mrs. Stobart characterizes the book as "a maelstrom of jumbled and chaotic thought," and afterwards says: "It is to the total eradication of the conscious mind . . . that Christian Science devotes its forces. . . . This it seeks to accomplish by expedients, such as the denial of the very existence of the conscious mind itself, as also by the hocus-pocus of a superimposed faith in Mrs. Eddy's own inspired person, hypnotically induced, by the reading and re-reading of the tangled maze of nonsensical sophistries, sufficient in themselves to cause mental coma in her victims."

Mrs. Stobart throughout her article pours contempt upon the claim, made by Mrs. Eddy, that diseases can be, and have been in numerous cases, cured by merely reading her book, which she calls "sanitive leafage," and says this "is but a pitiable exhibition of traits which would, by Max Nordau, be described as typical of megalomania and mental degeneracy."

She ridicules Mrs. Eddy's claim to divine inspiration, as the claim of "a certain American lady, bearing the name of her third husband, having been, since her childhood, set apart by God as the sole purveyor,—on strictly commercial principles,—of divine truth upon earth," with a "monopoly so sacred that everyone daring to poach upon her spiritual preserves, without her giving consent, inculcates (*sic*) a breach of the eighth commandment."

As to the metaphysics of Christian Science, "the fit place for their discussion would not be in the pages of this Review, but within the walls of a lunatic asylum. It may even be that for the due appreciation of Christian Science metaphysics an atmosphere of mental affliction is essential, insanity indeed 'yielding'—as Mrs. Eddy ingenuously tells us,—'more naturally than most diseases to the salutary action of her truth.'"

Mrs. Stobart dismisses "Mrs. Eddy's painful metaphysics," as "consisting from beginning to end of a tissue of burlesque absurdities and self-contradictions."

As to the Christianity of Christian Science she says: "Does not the Testament assert that God was made manifest in the flesh? But, if the flesh is an illusion then . . . Christianity, as an ingredient of the new religious hotchpotch, is an illusion also."

As to the "Science" part of the book, "science without matter, on which to exercise itself, must perform illusionary functions, and we then come to the *reductio ad absurdum*, that Christian Science, since it contains all the other illusions, is of itself the greatest illusion of all."

Notwithstanding, however, this wholesale denunciation of Mrs. Eddy's "inspiration," "circular logic," "painful metaphysics," "burlesque absurdities," "grotesque assumptions," and, in fine, the *reductio ad absurdum* of the whole affair, Mrs. Stobart recognizes in it "a great psychological truth," which "Mrs. Eddy distorts through the hollow medium of Christian Science for her own purposes, in hyperbolic language adapted to the ignorant and superstitious"—this great truth being "the power of the mind over the body."

This she defines as "a sublime principle," the principle, namely, of the unconscious mind, of the power which at work unconsciously to the individual, in every living organism, throughout the scale of nature, has ever for its object the preservation, the development of the species, and has therefore, in all its processes, a tendency which is invariably of the healing and preserving order, rather than of the destructive order."

This she calls the "*vis medicatrix naturæ*," "the natural therapeutic agency, whose power is dimly recognized by spiritual clairvoyants from time to time." This recognition of the "*vis medicatrix naturæ*" is refreshing to an old man who remembers

that fifty years ago it was adopted by the most eminent of the medical profession, and who had the pleasure of reading a book on that subject, by Sir P. Duncan to the late Hon. Dr. Widmer. It fell almost into oblivion, owing to the materialistic tendencies of subsequent years, but of late has been revived through the wonderful revelations of microscopical research. Why Mrs. Stobart should designate this as the operation of the "unconscious mind" is not clear. The processes seem to be such as are entirely beyond, or outside, of mind, whether conscious or unconscious. Mrs. Stobart's contention is that "the conscious mind" needs to be reduced to "passivity," so as to "prepare the field for the undisturbed operations of the great healing agency." She even goes so far as to say that "whilst the mind that operates, unconsciously to man, possesses a healing power, which is from the human standpoint miraculous, the conscious mind of man works, on the contrary, more generally harmfully than beneficially in disease."

Mrs. Stobart quotes from various medical authors, Dr. Schofield, Dr. Clifford Allbutt, Sir B. W. Richardson, Sir Geo. Paget, Dr. Murchison, Dr. Shaw, and others, as to the effect of fear, grief, anger, excessive mental strain and mental anxiety in producing not merely functional, but organic disease of various organs, but asserts that "although it is undoubtedly the case that the conscious mind can, and frequently does exercise itself, in some cases, beneficially, it is yet much more frequently powerless or misdirected."

Mrs. Stobart seems to be in accord with Mrs. Eddy's remarkable assertion: "The less mind is manifested in matter, the better. When the unthinking lobster loses its claw, it grows again. If the science of life (*i.e.*, Christian Science) were understood, the human limb would be reproduced as readily as the lobster's claw." (*Science and Health*, p. 484.)

Mrs. Stobart says: "That the organizing force at work in the development of man is drifting ever more and more away from the physical outworks of his constitution, is further shown by the fact that in the scale of living organisms, it is those animals which are highest in the progressive order of evolution that are least under the influences of, and are least responsible (*sic*) to the non-material healing power, *e.g.*, the recuperative capacity shown by the snail, the spider, or the lobster, in re-growth of lost claws and antennae as compared with man's powers of restoration of lost limbs."

This deduction is, however, based upon the assumption that the restoration of lost members in these lowly organized creatures depends upon their low nervous organization, whereas it is just as reasonable to conclude that the "*vis medicatrix naturæ*" thus makes special provision for the preservation of creatures with such limited nervous organization.

If it be true that low nervous organization conduces to increased capability of resisting disease, and to more unfettered exercise of the "vis medicatrix" we should expect to find the highest examples of such capability and recuperation amongst the imbecile and idiotic, which is contradicted by all experience.

If it be true that the higher man evolves mentally and spiritually, the lower he descends as to his physical organization we must give up the dream of a *mens sana in corpore sano*, and we must anticipate the monstrosity of a human being all brain and nerves, cursed with a degenerate, decrepit body, all of whose functions have become deranged, without powers of resistance to disease, or of recuperation. But is it true? Does not experience demonstrate that the highest intellectual development is compatible with the most perfect physical organization and health? Is it not true that as man has risen higher and higher, human life has increased in value? Is it true that the high-bred are more susceptible to disease and less able to counteract it, than the ignorant and uncultivated? No doubt it is true that the habits of life, unrestrained indulgence, undue excitement, excessive mental study, the frenzied struggle of modern life, have multiplied physical derangements, especially of the neurotic class, but simply because they have been indulged in contrary to the dictates of reason and science. As man progresses towards the sound mind he will more and more eschew these baneful habits, and he will more and more pursue those which conduce to physical and mental health.

Mrs. Stobart's suggestion that the conscious mind must be reduced to a condition of "passivity" in order that the "operations of the great healing agency may be undisturbed, seems to be at variance with her own explanation of the good results of "objective treatment by every quack, and in forms of subjective treatment by every faith-healer since the world began." This has been done, she says, "by a reduction of the mind to a condition, in which, by means of trust and faith in an outside power, all conscious activity is eradicated, and the wonder-working of the natural healing agency is allowed full sway."

Is this condition of "trust and faith" one of "passivity"? Are not they manifestations of supreme consciousness, of mental activity? The trust and faith may be placed on an absolutely inert something or nothing—on a tinker who undertakes to cure diphtheria by merely repeating the Lord's prayer, for a consideration, on the "sanitive pages" of Mrs. Eddy's ridiculous book, or in a healer who professes to argue silently, not audibly, that there is no such thing as the disease he undertakes to cure; but far from inducing "passivity," in every case an active, earnest, belief and a confiding hope of benefit, produce a good result in cases which can be benefited by such a condition of mind.

"Faith and trust" do undoubtedly aid the "vis medicatrix," but let it be faith in an all-merciful Father, who pitieth His children, and trust in a physician and surgeon who has studied the causes and conditions and results of disease, who knows how to apply the agencies which the Almighty has provided in profusion, and scientific investigation has shown to possess, wondrous influence on all the organs and structures of the body. Such a faith and such a trust will soothe and not only aid the natural healing power, but also increase the action of remedial measures. All other faith is founded on quackery and superstition.

Faith in God, and prayer to God, are expressly forbidden by Mrs. Eddy. They and Christian Science, she says, are "at opposite poles."

Since writing the above my attention has been directed to a paper by Dr. Beattie Crozier,* in the same number of the *Fortnightly* which contains Mrs. Stobart's, in which he attributes the psychological condition of Christian Scientists to "a species of self-hypnotism, which produces the effects which have given the cult its vogue."

This "self-hypnotism" is induced "by means of a series of regulated repetitions, by the constant iteration of certain thoughts and phrases," "by concentrating the attention, and silently repeating that God is good, and that there is no evil, and that pain has no real existence." Through this "self-hypnotism" there results a certain "happiness, serenity, sense of security," and the "relief of those functional disorders of the body which can be reached through the agency of the nervous system."

Dr. Crozier not only terms these as "abnormal" states, but considers them "as much abnormalities and excesses as the nitrous oxide exaltation, alcoholic intoxication, or opium eating."

His conclusion is thus expressed: "These mental conditions, however produced, whether by mesmerism, or hypnotism, or drugs, or by mental repetition and the concentration of attention, as in Christian Science, and the practices of the Yogis, or by emotional disturbances . . . are fatal to perfect sanity, when the mind has to deal with all sides of nature, and to be equipped for all sides of life."

*Of London, Eng. M.D. and Honorary LL.D. of Toronto University. Author of "History of Intellectual Development."

JAMAICA AS A WINTER RESORT...V HERE TO STAY AND HOW TO GET THERE.

THE Canadian winter can be best distinguished as brilliant; with special characteristics of its own, which to be known, must be experienced. It is not a sombre season; though the three prevailing colors are the grey, black and white of sky, forest and field. These in their shades and combinations lend to the snow-months an endless charm and variety, which seem, unfortunately, to have escaped the imagination of the laity as well as the skill of the artist. A few have even gone so far as to repudiate, or at least to ignore, the winter of Canada altogether; but to the lover of outdoor pastimes it is still very real; and to the physician it is a factor that has been gratefully reckoned with. It is tonic in its effect. It is bracing, renovating, inspiring. The breeze has liquid and invisible iron in solution. The air shines and glitters like champagne. The day is iridescent. The night, with its northern stars, a glory. It is a place to rear conquerors. Finally, it is strenuous, and appeals to the period of youth when the blood is most brisk. But there is somewhat of a strain nevertheless; and the debilitated may find themselves unequal to it. The broken and the infirm may dread it.

There comes a time when one fails to react; when the north wind chills, but ceases to invigorate; when the blood is thin, and the blanket of snow no longer causes the heart to leap up. Indeed, there are many cases where discretion is the better part of valor; and while it is often a great mistake to drag a patient away from his home and its comforts and familiar faces, there are times when it is a crime to leave him there. In health the exhilarating pleasures of the Canadian winter act as a stimulant, but in the feeble this stimulant is often contra-indicated. Also in neurasthenia, in all its protean forms, a warm and sedative climate is greatly to be desired, and the winter must be escaped at all hazards. A warm climate soothes and rests. It does not directly build up; but indirectly it prepares the constitution for this. There are few physicians who have not among their patients a dozen or more who would be infinitely benefited by a three months' rest during the rigors of the northern winter in the far South. But the South has its dangers also. Though scores of the aged die every winter in the North from maladies due to the cold, the South, on the other hand, has its malaria and yellow fever. Furthermore, many southern resorts cost a fortune to reach, and the revenues of a principality to remain at. In fact, the choice of a suitable winter resort in the South is not easy. Practical therapeutics cannot ignore the southern winter. To many hundred residents of the snowy zone, perhaps to

many thousands, the far South means life this coming winter. To many other thousands, who stand not in actual peril, it means health and rejuvenescence. Ponce de Leon sought these last in Florida, and he no doubt did well, but he who turns his face to Jamaica does better. Florida is low, and is called the land of flowers for unknown reasons. The Bermudas are also low, and the Bahamas. But Jamaica is a lofty group of mountains, towering in air more than a mile above the level of the sea. The Alpine is here blended with the soft Sicilian. The scenery is beautiful beyond all description. There is loveliness in the detail, majesty in the large.

The life in Jamaica is full of interest, and the living is within the means of those in moderate circumstances. The hotel charges are less than in Canada, only in one or two cases exceeding two dollars a day, while board may be had in private houses for one pound ten a week. As pointed out by the present writer in an article on the "Winter Climate of Jamaica," which appeared in this Journal two years ago; the island enjoys a marked immunity from many of the tropical diseases which render neighboring points undesirable as a winter residence. Yellow fever is entirely absent, and malaria is only contracted in a few regions, to which there is no call for anyone to go. The Hotel Titchfield, at Port Antonio, is conducted in the American fashion, and considering the service, is very moderate in charge. It is the only American hotel on the island, and will afford an agreeable stepping-stone for strangers who might not over-readily adapt themselves to life *a la Creole*, with which they will be met everywhere else. The sea-bathing here is a constant source of pleasure, and the northerner learns for the first time what sea-bathing really means. The water is as clear as an emerald, about the same temperature as the body, amazingly buoyant and medicinal in its effects, much as a mineral water bath. The roads along the coast and through the mountain valleys are of the best, and driving is a cheap and unfailing recreation. Moreover, though the climate is tropical, it cannot be called hot. The nights are cool and grateful. At noonday the thermometer seldom rises above 76. It is the lack of extremes in temperature that soothes and benefits the system. The life in a coast or mountain city is not exciting, yet the variety of wholesome recreation prevents the time from ever being dull or tedious and hanging on one's hands. At the Titchfield, which is one of the best hotels in the West Indies, all the comforts of the North are to be obtained, and when to these are added the immense variety of native luxuries, it is no wonder that the failing appetite is renewed when other means have failed. After all is said, the ability to eat a good dinner, and to sleep well

upon it is one of the best criterions of health. That be what it may, one carries away with him, after a visit to Jamaica, a sense of freshness which remains for a year afterward. From the Titchfield Hotel many excursions may be made to historical landmarks of great interest in the neighborhood.

The island of Jamaica is law-abiding, and quite free from the political tumults which disquiet most of the neighboring islands. The natives are quaint and interesting. Among the upper classes of society there is an air of old world refinement and culture. Kingston, the capital, is larger than Port Antonio, and is one of the most interesting cities in the West Indies. Here there are two excellent hotels, the Myrtle Bank, on the harbor, where it is constantly fanned by the breeze from the Caribbean Sea, and the Constant Spring Hotel, a few miles back in the mountains. Both are equipped with every modern improvement, and are very reasonable in charge. The city has a good system of electric cars, and the cab tariff will amaze residents of northern cities, expense being the rate for short drives and longer in proportion. The Jamaica Government Railway runs from one end of the island to the other, and is efficient in every respect, with penny mileage. As the route lies through some of the most beautiful scenery in the world, it goes without the saying that no visitor to the island should go away without availing himself of the opportunity to explore the island. A stay at Montego Bay, the western terminus of the railway, will also amply repay one. This ancient city of the Spaniards abounds in historical reminiscences, and it has been very aptly compared to Naples. The chief mountain resorts are all easily accessible from the Jamaica Railway. Mandeville is the nearest of these. It is in the heart of the mountains, and is surrounded by famous coffee plantations. There is an excellent hotel here under the management of Mr. Lindo, and the region is healthful in the extreme. The Santa Cruz mountains are also reached from the railway, and here also there are two well-kept hotels, that of Mr. Ambrose Lawrence, and that of Mr. Isaacs. Lastly, there is Moneague, a few miles from Mount Diablo, and at the Moneague Hotel excellent accommodation can be obtained. The world-famous Fern Gully is in the vicinity. The scenery about these resorts is very beautiful, and in some places the view approaches to the sublime. To Mandeville, Santa Cruz and Moneague might also be added Montpellier, in the mountains that overlook Montego Bay. The hotel at Montpellier is excellent, having been originally built by an English nobleman as a winter-home for the entertainment of his guests. By way of a last word, let it be understood as regards the hotels enumerated, none of these are "cheap" in the American sense, but compared with hotels of the same standard in America, their charges are cer-

tainly very reasonable. The places have been mentioned by name for the convenience of those contemplating a winter in Jamaica, and it may be added that the information given is not hearsay, but the result of personal knowledge of the places referred to.

In going to Jamaica one will be surprised at the comparatively small cost of the journey, as well as the shortness of the voyage. Going by rail to Baltimore one is there able to catch every Wednesday morning either the steamship *Brookline* or *Barnstable*, of the United Fruit Company's fleet, which make the voyage in a little over four days. By this route the traveller escapes much of the rough weather encountered in sailing from the northern ports, and each day the air will be found a little milder in a passage due south. On the second or third day the winter atmosphere has changed to the eternal summer of the South, and when one lands at Port Antonio, though the calendar may say that it is January, the thermometer declares the soft and balmy warmth of June, and the wraps and furs worn at setting out are put off for summer clothing. Though the fare is only thirty-five dollars, these steamers are, in the matter of accommodation, quite up to the standard of the great trans-Atlantic lines.

It has lately become a catchword in some of the States, owing to the pressure of competition in commercial matters, to always "patronize home industries," no matter how bad. Surely this philosophy ought also to hold, no matter how good, and if patriotism of this practical sort is to have any part in the question of a winter health resort, it is suggested that the Canadian health-seeker can scarce do better than spend his winter (and his money) under the British flag. The foundations of empire are often strengthened by apparently trivial circumstances, and no Canadian will ever regret making the acquaintance of this noble sister Colony which was in her golden prime a century before axe had fallen in the timbered solitudes beyond the Great Lakes. The English blood and the English faith have lost none of their virility where the tamarind grows and the cinnamon tree casts its shade; none of its sincerity where the jasmine exhales its intoxicating incense upon the night.

E. H. S.

ONE OF THE TROUBLES OF CIVILIZED MAN.

BY HELEN MACMURCHY, M.D., TORONTO.

WHETHER patients mention it or not when consulting a physician, they almost all suffer more or less from constipation. "Constipation is one of the troubles that afflict civilized man. It cannot be called a disease; it is really more a natural condition of the bowels, which have not yet been accustomed in the process of evolution to the altered circumstances of life."^{*}

It is convenient to have definite directions printed or typewritten for patients, concerning—

- I. Diet.
- II. Daily Exercise and Fresh Air.
- III. Drinking Water.
- IV. Daily Habits.

I. *Diet.*—At every meal the patient should eat one or more of the following articles of diet, giving them the preference, but taking meat at least once a day:

1. Fruit, especially fresh fruits and those containing small seeds, as figs, strawberries, etc.; grapes, raisins, apples, pears, peaches, raspberries, currants, cherries, prunes, oranges, olives, bananas, grape-fruit, etc.

2. Vegetables, especially those containing some indigestible fibre or other residue, as green vegetables, salads, potatoes, tomatoes, parsnips, onions, celery, carrots, turnips, etc.

3. Honey, syrup, treacle, jam, etc., anything containing sugar.

4. Any food containing common salt, neutral salts of vegetable acids, etc. such as herring, sardines, smoked fish, smoked ham or bacon, and food prepared from fruits, as marmalade, etc.

5. Any food containing fat, as butter, salad-dressing, cream, meat with fat, etc.

6. Whole wheat bread, brown bread, graham bread, ginger-bread, digestive biscuits, etc.—any bread containing some of the outside husk of the wheat.

7. Any food containing lactic acid, butyric acid, or other organic acids, such as buttermilk, sour milk, koumiss, kefir, etc.

8. Any food containing a solid residue, as porridge made from oatmeal, cornmeal, cracked wheat, rolled oats, etc.; oatcake and corncake.

9. Legs and wings of fowls, fish with skin, etc.

"Skins and bones,
Strings and stones."

10. Beef-tea, broths, soups, etc.

II. *Daily Exercise and Fresh Air.*—The general health and

^{*}Sir T. Lauder-Brunton, M.D., F.R.S., "The Action of Medicines."

muscular tone of the body have much to do with the condition of the intestines. Unless the general muscular tone is fairly good, we cannot avoid constipation. So the patient must take some suitable exercise daily, such as walking, riding, golfing, skating, bicycling, swinging clubs, fencing, playing tennis, football, basketball, etc., and go out in the open air for at least one hour every day.

III. *Drinking Water.*—A glass of water or lemonade, either hot or cold, should be taken about an hour or so before each meal, and also before retiring. Few patients drink enough water.

IV. *Daily Habits.*—A regular daily habit of relieving the bowels at a definite hour by the clock is essential. Time must be secured for this purpose and the patient must not be hurried. On no account allow this to be omitted. The feet should be supported, or braced against something. Sometimes adopting the crouching or squatting posture, instead of the sitting posture, while attempting to relieve the bowels will cure constipation. The patient must not strain.

Mineral waters are useful. A wine-glass of Hunyadi Janos, Apenta, or other mineral water, diluted with an equal quantity of boiling water and slowly sipped while dressing in the morning is often effectual.

Massage of the abdomen facilitates the passage of fluid through the pyloric orifice. Deep massage of the abdomen for ten minutes every day for a month, and then every two or three days for two months is often of service.

The "Neptune's Girdle," or local cold water abdominal pack, taken for ten to twenty minutes on retiring for the night may also be tried.

Many patients like the following plan: Stew 1½ ounces of senna with 1 pint of water, sugar, and prunes enough for the water to cover. Lift out the prunes, put them in a jar, strain the juice, and pour it over the prunes. Eat two or three prunes with two or three tablespoonfuls of the juice at breakfast, or after each meal if necessary. The best prunes, which are sold in bottles, should be used.

The ether douche* has recently been recommended. A fine stream of ether is allowed to play upon the abdominal wall once or twice a day for five minutes. A Richardson apparatus is employed and 100ccs. sulphuric ether are used for each application. One or two applications are said to have cured chronic cases. Glycerine suppositories or suppositories containing aloin are convenient and satisfactory, and are worth trying before having recourse to enemata or the continued use of laxatives administered by the mouth.

*I. Boas, M.D., of Berlin. *International Clinics*, Vol. I., Series XII.

ADVICE THAT KILLED—PHYSICIANS' FIRESIDE TALK.

BY ERNEST A. HALL, M.D., VICTORIA, B.C.

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It is wise to occasionally cast a retrospect of our professional life and personally act as our own censors. Few of us there will be who will be unable to uncover defects of both omission and commission, and he is unwise who does not make such deficiencies the stepping-stones to higher degrees of accuracy and greater proficiency. When in the recent campaign a general who had met with reverses was accused of making mistakes, his superior officer, with a knowledge of human nature deeper than that of the accusers, said: "A man who does not make mistakes never makes anything." The most exalted of intentions, the determination to give our best in service, the determination to accomplish the highest ideal, must at times meet with discouragement and defeat. In the recognition of our weakness lies the pathway and the stimulus to greater accuracy and the hope of future excellence. Let us then, who seek higher ideals in professional life, take time to calmly criticize ourselves, to humbly and sincerely investigate our own acts and determine whether or not we have to our own selves been true, for in this lies the secret of all true relationships.

In this connection I am reminded of the premature death of a young friend of unusually bright prospects, in whom I had taken an interest in the direction of his medical studies. Before leaving to prosecute his studies in a distant city, he asked my advice regarding the advisability of having his appendix removed, as he had some months previously a slight attack of pain, with tenderness in that region, which laid him aside only for one day. As he was to be closely associated with surgeons of international reputation I advised against immediate operation and told him to await the next attack, and then have it removed at once. Acting upon my advice, he commenced his studies; all went well for a few months, till, while taking a bath in the afternoon he was seized with a severe pain in the right side—a midnight operation, and in three days a repetition of the old story far too frequent, "_____ died from appendicitis this morning."

Comment is unnecessary. Had I given different advice his life might have been spared. Am I responsible for his death? I do not know, but this I do know, that since that time I have not given such advice as led this young man to postpone "till a more convenient season" the removal of that focus of danger.

We cannot be too emphatic upon that matter. A diseased

appendix is not to be tolerated. There is no moral nor surgical reason for the retention of that which at a moment's notice may cause the death of the individual. The operation between the attacks has, in the hands of qualified surgeons, been practically without mortality. Better operate upon a hundred cases unnecessarily than omit one in which such omission results in death. This vestige is nothing to be proud of. Is not nature in her efforts towards the higher evolution of the race entreating the surgeon to become one with her in the consummation of her great plan?

Another matter I wish to call attention to: the risk that an operator takes when he leaves an important surgical case in the hands of an inexperienced or incompetent attendant. A patient operated upon should remain under the surgeon's immediate care until convalescence whenever it is at all possible; if not, a thoroughly tried associate should have charge. I recall an instance in which it was impossible for me to remain in charge as the operation was performed in a distant city. It was a vaginal ovariectomy with dense adhesions, but no difficulty was experienced. Three weeks after the patient died. A glance at the chart, with the history as given by the attendant, showed distinctly a clinical picture of pelvic abscess bursting into the general peritoneal cavity with general sepsis and death in thirty-six hours. The attendant found a mass "dull and fluctuating" in the pelvis, but hesitated to evacuate the abscess, which could easily have been done through the vagina, and thus have prevented the rupture into the peritoneal cavity. But while realizing the failure to act upon the part of the attendant, I must not overlook the fact that through some fault (probably mine) the wound became infected.

Let me repeat that a few moments of self-examination each day might find a place in the development of even the busiest of practitioners.

Appendicitis Insurance.—It is an old axiom that everything can be insured at Lloyd's. Last spring that famous firm made a large amount by insuring against small-pox at the low rate of half a crown per cent. Now the prevalence of appendicitis has suggested to one of the most prominent firms in Lloyd's that the public might like to insure against it. For a premium of 5s. the assured, if he has to undergo an operation for appendicitis, will have all his direct expenses paid up to £200, and in the event of his death under or from the operation a total sum of £200 will be paid. Though the idea has only just been mooted, a large number of people have already availed themselves of this insurance. The premium, it will be noted, is the same percentage as was charged for smallpox. Age does not stale the infinite variety of Lloyd's.

Selected Articles.

LINNÆUS AS A PHYSICIAN.*

LUDVIG HEKTOEN, M.D. CHICAGO.

INTRODUCTION.

Among the physician-scientists who achieved their greatest renown in some department of learning other than medicine Carl von Linne, better known as Carolus Linnæus, must be placed in the front rank. This great naturalist made for himself a permanent name in medicine also, but the extent and significance of his work and interest in medicine seem to have been more or less overshadowed by the fundamental importance of his work in natural science, especially botany.

The principal sources of the information in this article have been Richard Pulteney's excellent work on the writings of Linnæus,† in which the medical writings also are fully considered, and Hjelt's special work concerning Linnæus as a physician,‡ based upon personal study of the writings and correspondence of Linnæus and of the records in the archives of the University of Upsala. Both these books appear to give altogether thorough and sympathetic reviews of Linnæus' medical activity in its various aspects as teacher, investigator and writer.

OUTLINE OF THE CAREER OF LINNÆUS.

Born in 1707, Carl von Linne was destined by his father for holy orders, but showed such distaste for scholastic studies and such desires to ramble in search of plants and flowers that his father was urged to apprentice him to a tailor or shoemaker. Through the kind efforts of a physician Linnæus was encouraged in his study of plants and of physiology, and eventually admitted to the University of Lund with a testimonial of the following ubiquitous import: "Youth at school might be compared to shrubs in a garden which may disappoint the gardener, but if transplanted

*Read before the Scandinavian Medical Society of Chicago, May 29, 1902.

†Richard Pulteney, M.D., F.R.S., "A General View of the Writings of Linnæus." Second edition, with corrections, considerable additions and memoir of the author by William George Maton, M.D., etc. London, 1805. With translation of Linnæus' diary.

‡Otto F. A. Hjelt, Carl von Linné som Lakare och hans Betydelse for den medicinska Vetenskapen i Sverige. Helsingfors, 1877.

into different soil they may prosper." It was hoped that in the university the conditions might be more propitious for his progress.

As a student Linnæus assisted in private practice. At that time there was no real clinical instruction in Sweden, and it was customary for the young men to work under preceptors ("frequentera sjukstugan och lara av den svidandes egna mun"). When Linnæus came to Upsala in 1729 the medical faculty consisted of two professors and one adjunct. One professor taught pathology, dietetics, surgery, pharmacy; the other physic, chemistry, anatomy, physiology and botany, each constituting by himself a whole faculty. Olaf Rudbeck, the older, celebrated for his discoveries in the lymphatic system, had founded a botanic garden, but his successor, his son (1660-1740), though a good botanist, neglected botany for comparative philology and antiquarianism. In 1730 Linnæus had advanced so far in the esteem of his teachers that he was given a stipend and began to lecture on botany, with such success that intrigues were started against him and his docentship taken away. Advised by friends, Linnæus went to Harderwick, in Holland, where he obtained his degree in 1735, the title of his dissertation being "*Hypothesis nova de febrium intermittentium causa.*" This thesis was founded principally on observations made in Sweden, where it probably was written. He sought, and after waiting eight days, gained admission to the great Boerhaave, then near the end of his illustrious career, but who helped him much in his botanical studies. At that time botany flourished in Holland, Boerhaave himself being a botanist, and Linnæus' love for botany kept him away from home and his future wife for three years longer. The work he did during this time exercised vast influence on the development of botany, being in reality the starting point of systematic botanical science.

He early became conspicuous in Holland and secured the regard of all that cultivated any branch of medical science, among them being Van Swieten and Lieberkuhn. Linnæus reaped the greatest benefit from his close relationship with the illustrious Boerhaave, who showed the young Swedish scientist marked friendship and confidence. The following extract from Linnæus' diary—a curious and interesting document—describes their last meeting: "Before the time of Linnæus intending to leave Leyden, Boerhaave had been attacked with hydrophora thoracis, and consequently with great difficulty of respiration; he had, therefore, given orders that no person should be admitted to see or speak to him, for he could not lie down in his bed, but was obliged constantly to sit up. Linnæus was the only person in whose favor exception was made, that he might see him and kiss the hand of his great instructor, to bid him a sorrowful adieu. The venerable

invalid had still strength enough left to stretch out his hand, and (putting it to his lips and kissing it in return) to say: 'I have lived my time out, and my days are at an end. I have done everything that was in my power. May God protect thee, with whom this duty remains. What the world required of me it has got, but from thee it expects much more. Farewell, my dear Linnæus!' Tears prevented him from saying more, and, on Linnæus' return to his lodgings, he sent him an elegant copy of his *Chemistry*." And surely Linnæus may be placed by the side of Haller, Van Swieten, De Haen and others as a worthy pupil of a great master.

Greatly honored throughout Europe for his work in botany, so that Sauvages wrote, "the whole botanical world obeys you forever," and having received flattering offers to remain in Holland, and also from Oxford and Paris, Linnæus, in 1738, returned to Sweden and settled in Stockholm, where, after a desolate period of waiting for patients, he achieved his first success through treatment of gonorrhœa. Always afterward he showed much interest in the treatment of gonorrhœa and syphilis. He became naval physician and utilized his opportunities to study diseases and the actions of drugs. He also secured permission to make post-mortems, heretofore but rarely granted, and Hjelt states that from this time the interest in pathologic anatomy increased in Sweden. In 1739 he married the choice of his heart after an engagement of several years; his practice increased rapidly, but he felt himself irresistibly drawn toward botany and natural science. He was offered a professorship in Gottingen, but in May, 1741, he received appointment as professor in Upsala in spite of a hot fight against him; the following year an adjustment with his colleague, Rosen, gave Linnæus botany and the botanical gardens, and for the succeeding thirty-six years the great botanist was continuously interested more or less in medical problems.

Thenceforward his life was a continuous course of prosperity. He was greatly honored. Botany occupied his special attention in spring and summer; in the autumn and winter months he gave the more purely medical lectures. He gathered about him a larger circle of students and listeners than any one either before or after him has done; the number of students in the university rose from five hundred to fifteen hundred, and he "shifted the scientific centre of gravity to a small town in Sweden." Students flocked to hear him from Finland, Norway, Denmark, Germany, Russia, England, and even from America. Adam Kuhn, of Philadelphia, spent the years 1763-1765 in Upsala as student under Linnæus, who regarded him with special favor. Kuhn, in 1768, became the professor of materia medica and botany in the College of Philadelphia, where he gave lectures on materia medica for twenty-one years. When the College of Philadelphia, in 1791, united with

the University of the State of Pennsylvania to form the University of Pennsylvania, Dr. Kuhn became professor of theory and practice of medicine, continuing as such for six years.

As a general result of Linnæus' influence, the study of the natural sciences received a mighty stimulus in the universities where logical disputations and metaphysical speculations too long had prevailed to the exclusion of science. The culture of natural science in Sweden was carried to a higher standard than elsewhere in Europe, but his pupils rapidly extended the doctrines and celebrity of their master, and before long numerous public institutions were established elsewhere also for the express cultivation of natural sciences. Linnæus emphasized eloquently the relations and importance of the study of natural history to the welfare of the people, and was ever striving to enlist the interests of the great in behalf of this study and to draw the youth of the land into its paths. In this respect there is great similarity between Linnæus and Pasteur; for Pasteur was irresistibly drawn toward scientific problems connected with industries of large economic importance. Linnæus found special delight in the study of natural science, which he regarded as "one of the richest and most permanent sources of pleasure which the kindness of Providence has opened to the human mind." In his labor to arrange anew the history of the productions of nature "he found biology a chaos and left it a cosmos."

LINNÆUS' RELATIONS TO MEDICINE IN GENERAL.

Linnæus was deeply interested in the development of medicine in all its phases. He urged its establishment upon a rational basis of theory and observation. Exact observations of nature and logical grouping of the results are essential for progress, philosophical theory being the key to the explanation of practical observations, which in turn test the theory. While empirical medicine employs curative methods, the mode of action of which it can not explain, rational medicine endeavors to discover the laws, mechanical and otherwise, that govern structure and function, and to re-establish the conditions that are disturbed by disease. Weak hypotheses and prejudiced notions retard medicine as well as other sciences; if medicine is to develop, it, like other sciences, must employ experimental methods. He recognized and expressed clearly that rational medicine to a large extent is the result of co-ordination of anatomic, physiologic, botanic, chemical and mechanical truths. Hospitals and botanic gardens are necessary for the study of the nature and treatment of diseases. In fatal cases the internal organs should be examined in the end that the causes of disease may be understood and perhaps prevented or modified. He suggests that in many diseases the arrest of

increased activity of the morbid cause may be all that can be attained.

Linnæus' interest in the methods of medical education proved of great importance to the study of medicine in Sweden. The course of instruction in the University of Upsala was modified and improved; the requirements for final examinations were raised and their character materially improved. Practical and public examinations in the hospital were introduced. Linnæus' lectures were characterized by clearness, conciseness, ingenuity of classification and direct bearing on practice, and the attendance became very large. Botany was not permitted to crowd out his interest in practical medicine in the widest sense. He wrote popular articles of medical nature, furnished material for almanacs and did much to disseminate useful advice and information. He aided veterinary medicine and helped it to secure recognition in his country. His writings in regard to alcohol unquestionably had some influence in checking the abuse of this substance. It was Linnæus' greatest pleasure to teach the results of his observations and to spread knowledge broadcast. Instruction was his most enjoyable occupation, and he regarded the creation of desire for and pleasure in study as the most important duty of university teachers. He did not hesitate to become the popular exponent of scientific observations, and as such we know he was instructive and inspiring.

THE MEDICAL PHILOSOPHY OF LINNÆUS AND HIS PRINCIPAL MEDICAL WRITINGS.

An interesting phase of Linnæus' work is the extensive correspondence he carried on with learned men and other persons all over the world. Perhaps the most noteworthy correspondence is that with Francois Boissier de la Croix Sauvages (1706-1767), professor in the medical school of Montpellier; between these two there was carried on a constant and frequent epistolatory exchange of ideas and observations without personal acquaintance. After Boerhaave, Sauvages undoubtedly exercised the greatest influence upon Linnæus' relation to and interest in medicine. Sauvages in 1731 published a work entitled "*Nouvelles Classes des Maladies*," which became Linnæus' guide in his lectures on nosology. In this work Sauvages, who also had a first love for botany, made the first attempt to arrange diseases into classes and species as recommended by Sydenham and Baglivi for medicine. The system and order in Sauvages' work at once appealed to Linnæus, in whom arrangement was a passion and classification a delight. Later, when Sauvages in 1760 published his great work entitled "*Nosologia methodica sistens morborum classes juxta Sydenhami mentem et botanicorum ordinem*," Linnæus at once introduced it as a text-book for his students. And Linnæus follows

Sauvages closely* in his own work on "Genera Morborum" (1763), in which the diseases are classified into orders, classes and species. The system is largely symptomatologic. Acute inflammations are referred to fevers and divided into membranous and parenchymatous. Especially the group of Morbi dolorosi contains many single symptoms listed as distinct diseases. The group of Deformes and Vitia which comprise cutaneous affections and tumors, etc., represent definite anatomic forms. Naturally the system corresponds closely with the views prevalent among medical men at that time. There was then no real knowledge of the finer structure of the human body, the relation of diseases to anatomic changes were not understood thoroughly, symptomatology was the phase most actively investigated, and a large fund of therapeutic experience had been gathered. Morgagni's fundamental work in special pathologic anatomy, "De sedibus et causis morborum," did not appear until 1762. While Linnæus clearly recognized the importance of pathologic anatomy—he himself made post-mortems while in Stockholm, and he subsequently urged their importance—yet his notions of general pathology were governed largely by his views concerning the action and nature of drugs.

	MORBI.		
	Febriles (e sanguine in medullam)	{	Exanthematici. Critici. Phlogistici.
	Temperati	{	Nervini { Sensationis Dolorosi. Judicii Mentales. Motus { Quietales. Motorii.
{			
		{	Solidi { Interni Deformes. Externi Vitia.
Exanthematicii			
Critici	Febris cum urinae hypostasi lateritia.		
Phlogistici	Febris cum pulso duro, dolore topico.		
Dolorosi	Doloris sensatio.		
Mentales	Judicii aberratio.		
Quietales	Motus involuntarius.		
Motorii	Motus abolitio.		
Suppressorii	Meatum impeditio.		
Evacuatorii	Fluidorum evacuatio.		
Deformes	Solidorum facies mutata.		
Vitia	Externa palpabilia.		

Linnæus' philosophy of disease is based on the fundamental conception that the human body consists of cortical and medullary (nervous) substances; it is like a woven cloth of double threads, the nerves constituting the warp and enclosing various fibres

*Linnæus has 11 classes, 37 orders, 325 species. Sauvages, 10 classes, 44 orders, 311 species

and fluids, the web. The medullary substance is of maternal origin and it is the first formed. Further, it is the seat of feeling and motion and the fluid and solid parts arise under its influence. The medullary part in turn is nourished by the finest materials in the cortical parts and by electricity taken in through the lungs from the air. Now, it is disturbance in the normal relations of these parts that cause disease. In fevers, for instance, the fluid cortical part is profoundly altered by acidifying (ab acido seri sanguinis) or decomposing substances that enter the body (a putrido cruoris sanguinis), the fever being critical in the first place and phlogistic in the second. Exanthematous fevers, on the other hand, perhaps depended on living contagium (ab exanthematibus vivis contagiosis). Every inflammation is accompanied by pain because the fibres are stretched to the point of breaking. In order to cure disease the condition of the fluid or solid parts must be changed to the opposite of that under which disease developed. Now, the power of medicines to produce such alterations may be recognized by their taste and smell, and the most important are obtained from plants of opposite smell and taste (sapida and olida). This theory of contraries is the leading thought of all of Linnæus' medical writings, and it constitutes the basis for his classification of materia medica. As seen from the subjacent table, he conceived that there were five kinds of taste and smell, each with its contrary, corresponding to five different pathologic conditions in the two constituent parts of the body. "Linne was the first who saw that nature is balanced by contraries, and acted upon numero quinario." He held smell to be due to motion in the nerves. The idea that the nervous system is distinct and separate from the rest of the body seems to have become necessary in order to arrange medicines in certain large groups because the odoriferous and volatile substances appeared to act directly upon the brain and nerves.

Agunt in corticale vitale :		I. SAPIDA.		
In Fluida.		In Solida.		
1. Aquosa	Mundificantia, Absorbentia,	Humectantia, Exsiccantia.		Sicca
2. Acida	Rifrigerantia, Balsamica,	Attenuantia, Tonica,		Amara.
3. Dulcia	Edulcorantia, Incidentia,	Impinguntia, Corrodentia,		Acria.
4. Viscosa	Inviscantia, Penetrantia,	Lubricantia, Abstergentia,		Salsa.
5. Pinguis	Obtundentia, Inspissantia,	Emollientia, Adstringentia,		Stiptica.
Agunt in medullare animatum :		II. OLIDA.		
Sensum	Excitant	Aromatica	Sopiant	Virosa
Motum	Spasticant	Argastica	Evacuant	Nauseosa
Judicium	Acuant	Spirituosa	Confundunt	Tetra
Libidinem	Provocant	Ambrosiaca	Suffocant	Airsina

Linnæus' pathology appears to be a compromise between the iatrochemic school—which taught that health depended upon the proper chemical relations of the fluids of the body—and iatromechanic or iatromathematic school—which explained disease according to the laws of mechanics and mathematics applied to the human body. While distinctly influenced by Boerhaave's fibrillar pathology, which sought explanations for disease in the tension and relaxation of fibres (*fibrum strictum et laxum*), which are constituent parts of the body, Linnæus carried this idea much further into details and sought also for corresponding conditions in the fluids. Accordingly, the fibres may be not merely tense or lax, but (*a*) moist, dry; (*b*) friable, tough; (*c*) fat, slender; (*d*) thick, thin; (*e*) flexible, stiff. As more or less corresponding conditions in the humors, including the blood, which are the real sources of solid fibres, he enumerates: (*a*) thin, thick; (*b*) acid, phlogistic; (*c*) oily, acrid; (*d*) plethoric, deficient; (*e*) glutinous, muriatic. The inter-relations between the fibres and the fluids are well expressed in the following sentence: "Qualis chylus, talis sanguis, qualis sanguis, tales fibræ, quales fibræ, tales oriuntur morbi." A fundamental idea seems to have been that equilibrium in nature depends on a constant struggle between opposites. "The human body may be considered as a balance, and when it equilibrates we feel well, but so soon as any overweight appears on either side, then we are sick." His principle of "contrariorum e contrariis curatio" is a further therapeutic application of this theory.

Materia medica was Linnæus' favorite branch in medicine. This naturally was due to the close relationship between pharmacology and botany. In those days botanists generally made incursions into medicine, and it undoubtedly was a source of much satisfaction to Linnæus that he could blend with his teaching of botany the practical part arising out of it, namely, materia medica. We know that he strove hard to introduce indigenous drugs into materia medica and to establish the cultivation of medicinal and other useful plants. He published a highly estimated *Materia Medica* (1749), which appeared in several editions in Germany. This work is regarded as his most important. The great A. von Haller calls it "commodissimum prælectionibus compendium, inter optima auctoris," and Gronovius and Royen added their compliments. For a long time it remained as a model for other authors. The pharmaceutical plants were arranged according to his botanical system and a careful description given of those drugs used in medicine with a brief statement of their therapeutic value. He endeavored to include only useful drugs and warned strongly against complex formulæ. The empirical classification was abandoned in favor of one based on the general theory that "sapida in fibras, olida in nervos agunt." The chief

merit of the work is that by bringing some degree of order and system into this branch he laid the foundation for the scientific study and development of *materia medica*. He was instrumental in introducing into medicine quassia, solanum, dulcamara, and many other substances. Hjelt lays much stress upon Linnæus' effort to establish the nature of poisons which, he urged, give us the best medicines if rightly used.

Another noteworthy book is his "*Clavis Medicinæ*," which contains his fundamental pathologico-therapeutic theories in the most concentrated form. Perhaps this is the most remarkable of all his works because it is a definite attempt to construct a comprehensive medical doctrine upon the basis of certain theoretical conceptions. It certainly is a striking example of Linnæus' ability to co-ordinate and arrange scientific facts of various kinds under one leading idea. Couched in a more or less aphoristic language, it makes rather difficult reading. It is dedicated to Sigfr. Albinus, *Anatomico summo*, Alb. von Haller, *Physiologico summo*, Gerardo Van Swieten, *Observatori summo*, Franc. de Sauvages, *Pathologo summo*, Nicol. v. Rosenstein, *Therapeutico summo*.

LINNÆUS' DIETETICS AND HYGIENE.

Linnæus was interested especially in dietetics and hygiene, and his lectures upon this topic were largely attended, and served to create marked professional and popular interest in hygiene, which thus got an early start in Sweden. He mentions six principal requisites for natural life, namely, fresh air, bodily movement, sleep, food, excretions and affections. He attributes hysteria and other morbid conditions among the rich to sedentary life. He explains the effects of air, exercise, etc., according to his general pathologic principles, as is further shown in this table from his "*Clavis Medicinæ*."

	FLUIDA.		SOLIDA.	
1. Excreta	Densa, Tenuia,	Torrida, Humida,	Retenta	2.
3. Motio	Phlogistica, Acidula,	Tenacia, Tenera,	Qvis	4.
5. Vigiliæ	Acria, Oleosa,	Macra, Pingua	Somnus	6.
7. Fames	Pauperata, Plethorica,	Gracilia, Turgida,	Cibus	8.
9. Frigus	Muriatica, Glutinosâ,	Rigidia, Fluxa,	Calor.	10.

The application of his general pathologic and therapeutic theories to hygiene is illustrated further by the following statements: Atmosphere influences the body through heat and cold. Cold renders the fibres stiff and the fluids more salty, leading to crystallization and stone formation, while warmth relaxes the fibres and promotes the formation of glutinous material. The

softer the fibres the greater the viscosity, the opposite of salty. Motion makes the fluids active, the fibres tenacious, and as the fluids are distributed the parts come closely together. Rest leads to the production of acid and renders the fibres brittle. Sleep leads to fat in the solid parts and makes the fluids oily; hunger and waking makes the fibres thin and the fluids sharp, hence the best remedy for fat is waking. Excessive evacuations render the fluids thicker and fibres dry, bodily enfeeblement and emaciation resulting, while retention renders the solid parts moist and the fluids thin.

LINNÆUS' ETIOLOGIC THEORIES.

Linnæus paid especial attention to the question of etiology of disease. He regarded the cause as of fundamental significance in determining the kind of disease in a given case. Like the old physicians, he divided causes into proximal and remote, and according to his theory the proximal cause lay in changed tension of the solid parts or in altered mixture of the fluids, while the remote causes might be found in diet, age, bodily constitution, or in contagion.

Perhaps the most remarkable of Linnæus' various medical theories is the one concerning "exanthemata viva," or that contagious diseases depend upon the entrance of small living animals into the body. This assumption he regards as fully warranted, both in analogy and experience. Of such diseases he mentions scabies, epidemic dysentery (*scabies intestinorum interna*), pertussis, smallpox, pest; later leprosy, phthisis pulmonum and the malarial fevers were added to this category. While the small animals Linnæus had in mind had not yet been seen or described, he saw in the manner of the spread of infectious diseases a remarkable similarity to the mode of reproduction and increase of many animals, especially insects. The smaller an animal the more numerous and rapid its progeny, hence it is not difficult to conceive that some of these minute organisms by their excessively rapid multiplication may in a short time totally fill, as it were, the whole human body. As an illustration of this fact he cites the inoculation of smallpox, in which the quantity of pus used is of no import in securing the development of good pustules. That the contagious element is destroyed by cold, but multiplies in warmth is cited as another evidence of the parasitic origin of contagious diseases. *Ustilago* is cited as analogous to the contagious element. The drugs that destroy insects of various kinds—musk, camphor, mercurials, sulphur, etc.—were useful also in contagious diseases.

Linnæus always felt much interest in intermittent fever, which was endemic about Upsala at the time of his first arrival, and which formed the subject of his inaugural dissertation in Holland

in 1735. He himself became a sufferer from this disease at the end of his sojourn in Holland. In Sweden intermittent fever occurred in clayey districts, and Linnæus first advanced the notion that particles of clay dissolved in water entered the blood, an by arrest in the finer vessels interfered with cutaneous transportation. Later this theory of waterborne malaria was modified very much, and the disease was attributed to absorption by the skin of fowl particles in the air, namely, miasms from quiescent waters, closed cellars, graves, decomposing animal and vegetable materials. Air, he urged, must contain some form of acid, because vegetable and animal tissues and fluids become sour under its influence. Now, is it not possible that intermittent fever is caused by a coagulation of the serous part of the blood under the influence of "animalcula infinite parva" in the atmosphere which carry this acidifying substance. In further support of this theory he mentions the endemic occurrence of the disease in moist places with clayey soil and foggy atmosphere; the frequency with which it affects persons living on the ground floor or in cold, foggy places; the sour sweats of malarial patients, and the fact that bitter drugs, such as cinchona, which generally diminish acidity in the body, are the most useful in malarial diseases. Consumption, he believed, was caused by the inhalation of fine particles in the air which is permeated by minute floating substances of diverse kinds; this he illustrated by referring to the frequency of "tussis calculosa" among the stone-cutters in Orsa, Dalarna. He frequently makes mention of the contagiousness of tuberculosis. As an especially efficient treatment of incipient tuberculosis horseback riding is urged.

MISCELLANEOUS INVESTIGATIONS AND OBSERVATIONS.

In 1746-47 and 1754-55 he was engaged especially in studying a peculiar disease then appearing in the southern parts of Sweden (dragsjukan). His observations were summarized as follows: The disease attacks only the lower classes, but children never; it occurs only in the autumn, and may show itself in domestic animals also; it lasts for two or three months, generally attacking several persons in the same household, but nevertheless it is not contagious. He concluded that the disease, which we now know as ergotism, is due to the use of freshly-gathered corn; and as it occurred mostly after wet summers, when weeds abounded, he assigned the real cause to the weed predominating in the fields, namely *Raphanus raphanistum* (jointed charlock or black radish), and suggested the name raphania. The disease was known under this term until the correct name arose from a more exact knowledge of its etiology.

Much of Linnæus' work is contained in dissertations by his pupils, and many of them were enlarged transcriptions of lectures.

A collection was made in a series of ten volumes,* of which seven are by Linnæus and three by Schreber and Erlangen. Pulteney gives an abstract of those by Linnæus' students.

Linnæus emphasized much the diagnostic and prognostic importance of the pulse. Actual knowledge of circulatory diseases seems to have been well advanced at that time, because we find he attributes irregular pulse to any of the following conditions: Inflammation of the heart; dilatation of its muscle; aneurisms; tumors, polypi, and abscesses of the heart; inflammation of the valves; obliteration of the pericardial cavity and other lesions of the pericardium; irregular action of the cardiac nerves. Further, it may depend on paralysis or spasm of the vessels, inflammatory stasis, ossification of the arteries, aneurisms and polypoid concretions. Finally, the cause may be in the blood itself.

It is of much interest to note that Linnæus suggested that fibrinous polypi within the vessels may be loosened and cause death from sudden suffocation. In other words, he recognized fairly well the mechanism of pulmonary embolism.

Linnæus distinguished correctly between cerebral hemorrhage and congestion. His description of hemiparesis is excellent, being himself a sufferer from this affection. In 1742 he described well a typical case of aphasia, under the title of "Failure to remember substantives, especially names" (*Glömska af alla substantiva och isynnerhet namn*). Matthew Bailie described aphasia first in English, and that was in 1806.

His study of the Gadfly of the reindeer—*Oestrus tarandi*—during a journey of scientific exploration into Lapland while still a youth, is an excellent example of power of observation and of accurate and decisive description. In the first place the fly is described accurately, as is the method of disposition of the eggs on the skin by means of the tail. Then he shows that the knots penetrate the skin at a time when the horns are in the velvet, and so soft that the pests can not be driven away, the entire series of events as well as the intricate mechanisms brought into play being ascribed to the ingenious arrangement of an all-wise Creator. Even then he studied carefully sickness among men and animals.

Rosen and Linnæus made many important observations concerning parasitic worms; among those described is *Tenia solium* (Linne, 1756). He taught that tenia had no head, and that it might grow *ad infinitum*.

CONCLUSIONS.

In terminating this fragmentary sketch of a small part of the work of Linnæus, it seems to me that he is fully entitled to a place among the founders of the scientific school of medicine whose ob-

**Amoenitates academicæ seu Dissertationes variæ Physicæ, Medicæ, Botanicæ, etc.* G. Dubois, 1748.

ject it is to understand the nature of disease and to find and remove the causes of disease. The underlying principles, the scope and the results of his teachings and his labors entitle him to this distinction. At the same time as his predominating influence on the study of natural science in general, both directly, especially in Sweden, and indirectly advanced the scientific study of medicine, he himself and his pupils made distinct and permanent additions to our knowledge of diseases. He fully recognized and urged the importance of theoretic investigation in medicine, unprejudiced observation at the bedside, anatomical inquiry and rational therapy. Finally, he saw glimpses of great etiologic truths in regard to infectious diseases at a time when the great and populous microscopic world was indeed a "mundus invisibilis."

APPENDIX.

Linnaeus' one foible, according to the standards of to-day, was love of fame, and this frailty is freely exposed in his diary, the part of which concerning medicine is transcribed as translated from the Swedish manuscript in Pulteney's work, second edition, edited by Maton:

Linnaeus practised physic at Stockholm from 1739 to 1741; he was physician to the great naval hospital there, and had, besides, as much practice as all the other physicians collectively; but, on being made Professor, he relinquished the whole of it, because either that or his duties as a Professor must otherwise have been neglected. From this period, therefore, he attended only his friends and the poor.

Physiology derived from him an important discovery, namely, *Generationem ambigenam*. Harvey maintained that the rudimentum futuri foetus lies in ovi puncto saliente; Leeuwenhoek, that it lies in *geniturae verminulus spermaticis*; Linne, on the other hand, that from the mother comes *Carina Malpighii*, rudimentum encephali, and from the father *punctum saliens cordis, et inde totum corpus*. This he proved by observations on hybrid animals, hybrid plants, etc. Thus, sense and temper, with tenaciousness of life, proceeded from the mother, but external appearance and habit, with strength of constitution, from the father. The *Medulla spinalis* would grow in infinitum if it were not confined by the *spina dorsi tandem ossificata in pubertate*; et a *retropressione libido*. The contrary happens in *Tæniæ*, and in vegetables which have no bone in their composition. *Ossea crusta* will grow infinitum, *cæteris paribus*. The object of respiration, he thought, is to extract the electric fluid from the air by the lungs and thus to transmit it to the medulla, becoming the *spiritus animalis*, as it were; and hence, that the chief office of the lungs is not to accelerate the motion of the blood. Some foreigner has considered this as an hypothesis only, but Linnaeus as an axiom.

Pathology is a subject on which he corresponded more than thirty years with the learned Sauvages, above one hundred of whose letters are in his hands.

Genera Morborum have not been so clearly defined by any one; there is not a single word in them that is not useful; his work on this subject is an excellent compend for a tyro. He has divided fevers into three classes, after a method entirely his own: Exanthematicæ typo scabiei ad exanthematibus vivis contagiosis; Criticæ typo rheumatis (Fluss), ab acido serisanguinis; Phlogisticæ, typo inflammatorio, a putrido cruoris sanguinis.

He was the first to explain that *Tænia* had no head, and grows infinitum, and also that fragments of this creature sprout again.

That *Lepra* is caused by a species of *Gordius*, found principally in herrings, has since been confirmed by the Norwegians.

To show that *Raphania* is occasioned by the *Raphanistrum* required his thorough acquaintance with natural history.

He maintained that *Scorbutus* is caused by culinary salt.

Diet nobody has treated of in a more solid and satisfactory manner, though he did not publish anything on the subject. His doctrines, like those of the later natural philosophers, are deduced from experience, and his system, like theirs, may therefore be called experimental. Everything was deduced from occurrences in common life, cited in their proper places as examples, on which account his auditors were never more numerous than when he lectured on this subject. Several persons took notes at these lectures, but all the notes I have seen are incorrect.

Pathology, the foundation of the whole medical art and of all medical theory, has been more improved by Linnæus, in his *Clavus Medicinæ* of eight pages (which is a masterpiece in its way, and one of the greatest treasures in medicine) than by a hundred authors and books in folio.

The Mechanical Physicians, indeed, had shown that the action of the *Sapida* consists in relaxing or constringing, according to the nature of their taste; but neither the species *saporis*, nor their contraries, were explained—much less the nature of the *Olida*. Linne was the first who saw that nature was balanced by contraries, and acted upon numero quinario. He saw that the Creator had given to animals two senses, viz., taste and smell.

That the *Sapida* act only on the fluids and solids, or on the fibres.

That the *Odora* act only on the brain and nerves.

He found that *Vitia Corporea*, as well in the fluids as the solids, are only five in number.

That the *Vitia Encephali, vel Systematis Nervosi* are likewise five; each with the same number of contraries.

He likewise found that the *Sapida* and *odora* are also five, with as many contraries, and that the right indication results from a

comparison of contraries with contraries. He proved this by examples. What can be stronger?

For this was required all the knowledge that Linnæus possessed of diet, natural history, medicine, materia medica. Few physicians had been conversant with all these branches together. Fortunate were those students who, before his time, could acquire this knowledge.

Not to mention that Linnæus was the first who said that all our principal medicines are poisons; that physicians ought not to condemn poisons, but to use them, as surgeons their knives, cautiously.

The *Materia Medica* likewise was in a confused state, and many articles were imperfectly known until Linnæus reformed it. He introduced the genus, specific difference, select synonyms, place of growth, cultivation; deduced their medicinal effects and uses from the impressions they produce on the organs of taste and smell, and, lastly, described the several compositions, all of which had been either confounded or superficially treated of before, but by Linnæus were distinctly explained in his *materia medica*.

He was the first person who determined *Sarcocolla*, *Balsam of Tolu quassia*. He introduced several new articles; revived the use of others which had been forgotten: *Ophiorrhiza*, *Fungus Melitenensis*, *Senega*.

Dulcamara. Linnæus was the first who brought this plant into general use in Sweden. He cured Syphilis and Scorbutus with it.* *Virgo scorbutu summa afflicta, quam omnis generis remedia frustra essent adhibita, ejusque gradus ad summum pervenisset, Medicus Razout, concilio Sauvagesii, eam perfecte curavit solo usu decocti Dulcamaræ, quod remedium Sauvages ab Illo. Linnæo acceperat. Dulcamaræ decocto multos syphiliticos curavit Sauvages hujus usu a Linnæo edoctus.*

Sauvagesium paucis ante abitum annis lippum, ut vix legeret librum, curavit Linne infuso caryophyllorum, ut ipse in literis fatetur "tibi debeo oculos meos."

Ledum. He was the first person who taught that it was the chief specific against the whooping cough.

Moschus. He was the first who introduced it for the cure of contagious diseases, and as a preservative or expellens horum, ex principio febrium contagiosarum ab exanthematibus vivis—now common.

R. Britannicæ (Rumicis Aquatici radix) applied to ill-conditioned ulcers, he was first informed of from America, and by him it was communicated to Europeans.

D'Ailland's powder he asserted to be (*Pulvis*) *Baccarum Rhamni*.

Guy's powder against cancer *Foliorum Actæææ*.—*Journal of A. M. Assoc.*

*Act. Paris, 1761, p. 53.

Pharmacology and Therapeutics.

IN CHARGE OF
A. J. HARRINGTON, M.D., M.R.C.S.(Eng.)

THIOL*—A SOLUBLE FORM OF GUAIACOL.

Among the remedies commonly used in tuberculosis, creosote and its therapeutically active constituent, guaiacol, occupy undisputedly a high place. The efficacy of these two medicaments is universally recognized, yet they have several drawbacks which stand in the way of their more general and prolonged use. For example, guaiacol and creosote act as irritants and even caustics on the mucous membrane of the mouth, esophagus, and stomach. Both guaiacol and creosote have a decidedly unpleasant odor and taste, on account of which most patients take them only with repugnance; in consequence, the treatment with them is usually interrupted as soon as possible, or even entirely discontinued. Guaiacol and creosote are for all practical purposes insoluble in water, and though sufficiently soluble in 50-per-cent. alcohol, such a solution is irritating and prone to excite coughing and to produce a lasting sensation of burning in the throat.

The above facts have led in recent years to the introduction of various acid esters of guaiacol; but these, while in some instances tasteless, are all insoluble in water; besides, they are not decomposed into their components and absorbed in the stomach, but undergo decomposition—and that a partial one—only on reaching the alkaline intestinal secretions. In view of this they do not replace guaiacol.

More recently investigators have succeeded in preparing a compound of guaiacol that is readily soluble in water, free from the taste and odor of the latter, non-toxic, and extremely assimilable. This new preparation is thiol, the potassium salt of orthoguaiacol-sulphonic acid. As appears from the sub-joined clinical reports, we have in thiol a form of guaiacol which is convenient for dispensing purposes, non-irritant to the mucous membranes of the alimentary canal, and which, furthermore, has the following advantages:

1. Owing to its great assimilability, it affords the possibility of successfully combating phthisis.

*Guaiacol-sulphonate of Potassium.—Roche.

2. In consequence of its non-irritativeness and non-toxicity, it does not give rise to untoward symptoms of any kind, not even with continued use.

3. It causes the symptoms of pulmonary tuberculosis—emaciation, anorexia, decline of strength, fever, night-sweats, etc.—to disappear in a short time, quicker than any other medicament hitherto in use in phthisis.

Thiocol may be prescribed either in plain powder, in cachet, capsule, or tablet, or in aqueous, alcoholic, or syrupy solutions; its faintly bitter but not disagreeable taste is perfectly corrected by orange syrup or syrup of cinnamon.

The ordinary adult dose is given as from 45 to 80 grains per day, taken in three equal portions, after meals. Some physicians advise beginning with 10-grn. single doses, and gradually increasing, if need be, to 30 grn. per dose. As much as 4 dr. have been given daily, with material benefit.

Thiocol is employed in phthisis, chronic coughs and catarrhs, scrofula, etc.; in short, wherever guaiacol or creosote appears to be indicated for internal use.

The composition of thiocol (potassium guaiacol-sulphonate—Roche) is shown by the formula $C_6H_3.OH.OCH_3.SO_3K$. It occurs as a white, micro-crystalline, odorless, permanent powder, of a faint bitter-saline but not disagreeable taste. It is readily soluble in water, and dissolves also in diluted alcohol, but it is insoluble in ether or in fatty oils. Its aqueous solution is colored violet-blue by ferric chloride, the color changing to wine-yellow on the addition of ammonia water.

Thiocol has a powerful reducing action on silver salts and ferric compounds, and at once decolorizes permanganate solution. On being oxidized with the latter the benzene nucleus is split off and destroyed, while sulphate, oxalate, and carbonate of potassium appear in the filtrate.

After the administration of thiocol, almost the total amount of sulphur from the medicament is found in the urine as sulphate, with a small proportion of guaiacol-sulphonate.

Careful physiological experiments, made by Dr. G. Rossbach at the Medico-Chemical Institute connected with the High School at Berne, Switzerland, and by Prof. Sor Jacquet at the Medical Clinic of the University at Basle, Switzerland, have demonstrated that thiocol, given per os or injected subcutaneously, is non-toxic, produces a striking increase in weight, and shows no injurious influence on the composition of the blood.

On the contrary, in most cases there was an increase of blood corpuscles and hemoglobin; in some instances the quantity remained unchanged. Furthermore, the animal experiments

proved the extreme assimilability of thiocol as against other guaiacol compounds—where only 7 per cent. of guaiacol carbonate was absorbed, 70 per cent. of thiocol was assimilated.

Dr. Rossbach reports, in part, as follows:

“In two series of examinations of the urine of a healthy person, before and after giving thiocol, quantitative determinations of the sulphur eliminated were made, taking into consideration the following facts: The sulphur excreted in the urine is partly derived from the organic and inorganic sulphur compounds and albuminoid constituents of the food, and partly from the albuminoid material of the circulation, the muscle and horny tissues, the bile, and to a very small degree from the bones, the mineral constituents of which are very slightly affected by metabolism.

“If an individual be placed under unvarying conditions of nourishment, and it is shown at the same time that the excretion of nitrogenous matter is subjected to none or only very slight variation, while, on the other hand, after administering thiocol (which contains sulphur) the sulphur content of the urine increases, the additional sulphur which is found can only be attributed to the introduction of the preparation into the system; the more so, as the action of thiocol on the secretion of bile is excluded, if we are guided by Barbera’s theory of bile-formation. According to Barbera, only those compounds act as cholagogues which at the same time have an action on the blood.”

But a series of experiments carried on by the author has proved that thiocol is absolutely indifferent toward the blood. He gives some interesting data in the form of carefully compiled tables. The conclusions the author draws from his experiments are briefly as follows:

1. Thiocol has the advantage over other guaiacol preparations of being freely soluble in water.

2. Its solubility in water and its permanence in air allow of its employment in any form—powder, tablet, solution, etc.

3. Thiocol excels all other guaiacol preparations and all the compounds of creosote in its high capability of being absorbed by the animal system (about 70 per cent.).

4. Its non-toxicity, whether administered per os or by subcutaneous injection, is also of great value.

Professor Jaquet reports the result of his experiments as follows:

“I have treated six rabbits with thiocol. From Oct. 12 to Dec. 12 each animal received daily 0.2 gm. (3 grn.) in 10-per-cent. aqueous solution, subcutaneously. The injections were well borne, never produced abscesses, and only occasionally a slight induration. Before the experiments were begun the body-weight

and the composition of the blood were determined, and the urine was examined. The urine analysis was repeated every week, the weighing and the blood examinations were seen to in the middle of the experimental period and at the end of it.

In no instance could albumin or blood be detected in the urine. Hematoporphyrin was regularly tested for, but invariably with negative results. As for the influence of the thiocol medication on the blood, in every instance the blood corpuscles and hemoglobin remained the same or increased; no untoward effect on the composition of the blood could be observed.

As regards the general condition of the animals during the experiments, not the least disturbance was noticeable, while the body-weight increased surprisingly.

"During the two months of careful observation no untoward effect was noticed from the use of thiocol."

NOTES ON SCHOOL HYGIENE.

Teeth of School Children.—A dentist of Germany states that out of 5,300 school children examined, only 4.37 per cent. had sound teeth.

An Anticorset Decree has been issued by the Minister of Education in Saxony, who holds that tight lacing is as fatal to intellectual development as the cigarette. By this decree no girl wearing a corset may attend the public schools or colleges.

The Lowest Death-rate ever recorded by a civilized nation is shown by the census of Sweden and is reported as 16.49 per 1,000 during the last ten years. Norway ranks next with 17.9 and England third with 18.8. At Skegness, in Lincolnshire, in a population of 2,500 only 25 deaths occurred last year.

The Vision of School Children.—In the spring of 1902, eight ophthalmic surgeons were appointed by the London School Board to test the vision of children attending the schools under the jurisdiction of the Board. The surgeons have examined more than 17,000 children, and have found that 8 per cent. of the boys, and 11 per cent. of the girls in all the standards have seriously impaired vision.

Only One was Vaccinated.—"In the town of Gloucester there is a beautiful cemetery, and in one corner of the cemetery there are the graves of no less than 280 little children, all under ten years of age, all of whom died seven years ago when a terrible

attack of smallpox visited that town. Of these 280 children who died of smallpox, 279 were unvaccinated and only one was vaccinated."—*From a Sermon.*

The Education of Children Mentally Sub-Normal.—The Board of Education for Greater New York has recently directed the principals of the schools to report on the number of school children showing mental deficiency. It appears from their report that 1.7 per cent., or 8,500 of out 500,000 school children in New York are mentally sub-normal. It is not unlikely that both for their own sakes and for the sake of other pupils special methods should be used in educating these children.

Educate the Educators.—The Incorporated Society of Medical Officers of Health held their annual meeting recently at Hotel Russell, London, Eng. The inaugural address of the President, Dr. J. Spottiswoode Cameron, Medical Officer of Health of Leeds, was on "Sanitary Progress During the Last Twenty-five Years,—and in the Next." "We ought," said Dr. Cameron, to educate the educators, to teach the teachers. Every teacher in an infant school ought to be able to recognize the early symptoms of the commoner infectious diseases and should have authority to consult a medical man as to their real nature. The visit of the medical man to the infant school ought to be a matter of common routine. It should take place, as a matter of course, soon after the assembly, and he should see those children whom the teacher had picked out at the roll-call."

H. MACM.

Marsyle Clin Solution for Injection in Sterilized Tubes.—The hypodermic injection of the salts of iron is not generally advised. Certain authors believe them useless; others regard them as painful, and the cause of a strong local reaction. The result thus far with the injection of Marsyle Clin solution shows that it is rarely painful and is not accompanied by any irritation. Injection should be deeply made in the gluteal muscles. The hypodermic method may be employed when the oral method is contra-indicated. The solution for injection is sterilized, and contains exactly five centigrammes of Marsyle to the cubic centimetre. It is furnished in sterilized tubes, the contents of which always slightly exceed a cubic centimetre, to permit of completely filling the syringe. After injecting the solution, carefully wash the needle and syringe in boiling water, to avoid oxydation. *Doses.*—At the outset, one injection every two days, of one-half to one cubic centimetre. After the susceptibility of the patient has been tested, daily treatment may be instituted.

Proceedings of Societies.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the Toronto Medical Society was held on December 18th, 1902, at the Toronto Orthopedic Hospital, the President, Dr. S. M. Hay, in the chair.

The interest shown in a meeting to be devoted entirely to orthopedic work brought out a larger number than usual. No papers were read, but the meeting made entirely clinical with a view of showing a considerable number of patients, as seen from the following programme:

- 1.—X-ray Prints, Dr. B. E. McKenzie.
- 2.—Injury to Shoulder, Dr. McKenzie.
- 3.—Deformity of Leg, Dr. Galloway.
- 4.—Operation for Shortening of the Ligamentum Patellæ, Dr. Galloway.
- 5.—Hemi-hypertrophy of the Lower Extremity, Dr. Galloway.
- 6.—A Case of Nervous Disease Presenting Unusual Difficulty in Diagnosis, Dr. McPhedran.
- 7.—Case of Web Fingers, Dr. Webster.
- 8.—Adult Cases of Club-foot, Dr. McKenzie.

1. X-ray prints of both feet were shown, one of the normal foot and the other of a foot in which the astragalus had been crushed down by a fall from a height, the patient lighting upon the feet. The pictures showed very clearly not only crushing of the astragalus, but also the fracture of the anterior part of the lower end of the tibia, this being carried downwards and presenting an obstruction to dorsi-flexion of the foot. This had been removed through an incision made in front of the joint, permitting the restoration of the foot to a normal position.

The second case was that of a gentleman who had fallen on the 5th of September, striking the point of the shoulder on the sidewalk. No fracture or dislocation could be found, but in spite of continued rest and the absence of swelling or infiltration, great pain, tenderness, and immobility remain.

Dr. Silverthorn referred to the marked advantage resulting in such cases, from free forced movement of the joint under anesthesia.

Dr. Price Brown referred to a similar case that he had seen,

where Dr. McKenzie had advised counter-irritation by blister, after which rapid improvement followed with complete restoration of function.

Dr. Hooper referred to the great gain resulting in these cases from the use of the cautery.

Dr. Carveth said that sharp counter-irritation would first be tried, that failing, the joint would be freely moved under anesthesia.

The third case was presented by Dr. Galloway, this being a child with very marked congenital deformity of the leg and foot, referred to him by Dr. Barrick. At about three months the foot and leg were forced by manipulation into a greatly improved position, and thus retained by a plaster-of-Paris dressing. Treatment similar to this was repeated several times, until now when the child is beginning to walk, there is much less deformity, but a bowing forward of the tibia, which, should it continue, will demand osteotomy when the child is a little further developed.

Showing the next case, one of double bow legs in a child six years old, Dr. Galloway pointed out that this deformity in young children was likely to recover spontaneously, provided the general health were properly looked after and good nourishment secured. After three or four years of age, however, there is little prospect of a spontaneous recovery. At no age does he consider the use of mechanical braces a satisfactory means of securing correction. The braces, if used at night with sufficient force to effect correction, will greatly disturb the child's rest. If employed in the day time it is difficult to keep them so adjusted as to effect any improvement. He holds it better to treat the child first constitutionally, and to resort to manipulation of the limbs until the child is three or four years of age. At that time, if necessary, osteotomy of the tibia may be performed; it is practically without risk and invariably secures a good result. This operation may also be done with great satisfaction for the adult.

The next case presented was that of a young woman twenty years of age, who had infantile paralysis in her second year, which so much disabled and produced such marked deformity of the lower extremities, that at twenty years of age she had never walked. The correction of deformity had not been a difficult undertaking; active and passive exercise and massage had been employed, so that by the aid of leg braces she had learned in the past year to walk about without the use of crutches, and in using the latter could walk a half mile. During the long period of flexion at the knees the ligamentum patellæ of each limb had become unduly stretched; it was thought that a shortening of the ligament would restore considerable power of extension. A nail had been passed horizontally through the patella without entering the

joint, the ligament had been exposed, a section removed from it, the patella pulled far downward by traction upon the nail and so retained and the segments of the ligament sutured together. As this had been done only a week previously the effect of the operation is as yet unknown. Dr. Galloway then presented a very striking case of giantism of the right lower extremity in a child nine months old. At birth the foot was abnormal in shape, all of the parts being greatly hypertrophied excepting the great toe. An effort had been made by confining the foot and limb in a very tight plaster dressing, to prevent further growth. This had been, however, without result, so that at present the foot is as large as would be found in a child of eight or ten years. The remaining part of the limb even up to the region of the glutei being also much enlarged, but not proportionate to that of the foot. This case aroused considerable interest and was discussed by Dr. Beatty, Dr. Porter and Dr. Wilson as to the pathology.

Dr. McCullough suggested that the natural condition and appearance of the great toe might indicate that the affection was nervous in its origin, and that an examination of the nerve structures would be highly important.

Dr. McKenzie said that he had seen several cases somewhat similar, one of the most marked was that of a boy, under the care of Dr. H. B. Small, of Ottawa, in whom the trouble was not noticed until the boy was about six years of age. Being in London at that time several surgeons were consulted as to the reason for the greatly increased size of one lower extremity, without being able to offer any satisfactory explanation. During the several years that have elapsed since that time the limb has continued to increase relatively faster than its fellow. The relative growth, however, and disproportion is not in any way comparable to those of the child just shown. Another case seen a few days ago, with Dr. Walker, of Glencoe, was that of a boy fourteen years of age, healthy and well developed, who has one limb nearly three inches shorter than its fellow. He would regard this case rather as a case of shortening, or rather non-development of this limb in length, than hypertrophy of the other. The boy is in good health, the development of the limbs similar in every particular, except in length; he plays football actively, and has in every way as good use of the short limb as of the other. The longer limb is in proportion with the boy's growth in other particulars. The history does not afford any explanation.

Dr. Galloway stated that the pathology of the condition was not well understood, that a condition of the lymphatics had been found that would indicate that it was due to faulty lymphatic function; other cases had been examined which tended to show

that the fault was in the central nervous system. In this case amputation had been advised, and would at once be performed.

The next case, though present, was not shown, as Dr. McPhe-dran, having been called away, was unable to present it.

Dr. Webster then presented a boy 14 years of age upon whom he had operated for webbing of the second and third digits. He had modified the ordinary operation by so making the incision from the space between the ends of the fingers to near the meta-tarsal joint as to present a triangular flap. The operation had been decidedly successful, and Dr. Webster was complimented upon the result by Dr. Galloway and others.

The last cases presented were a number of persons from 18 to 35 years of age, all of whom had suffered from double congenital club-foot. Two or three of these were in men varying in age from 20 to 35 years, who had been operated upon from two to four years ago without removal of bone or making any open incision. It would be difficult to detect in the walk of these individuals, or in the shape of their feet, that any deformity had ever existed. One patient presented was a young man, 23 years of age, operated upon thirteen years ago; this proved a most instructive case. The first foot at that time was dealt with by open incision, as advised by the late Dr. A. M. Phelps, of New York. While waiting at that time for the healing of the wound made by open incision, the other foot was being straightened by manipulation and retention in plaster after each time that rectifying force was employed. Noticing that improvement in the foot was readily effected in this way, the open incision was not made. After a few months, when both feet had been fully corrected, it was regarded as a very satisfactory result, both feet being in a good position. On coming to live in Toronto a year or two ago this young man presented himself, showing that in the lapse of years the foot operated upon by open incision had not grown nearly so well as the other, and that some contraction had occurred at the scar, so that neither in function nor appearance is that foot fairly comparable with its fellow.

Dr. McKenzie pointed out that this was an object lesson which should not be lost sight of. Within the last ten years he had corrected thirty cases of club-foot in adults, without making any open incision, with osteotomy, and without removal of bone. Several other cases that are now in course of treatment, in persons from 20 to 30 years of age, were shown. In view of the history of these cases and the successful results shown without any extensive cutting and without removal of bone, he wished himself to be understood as claiming that such radical methods, as the removal of bone and the Phelps operation in children, were un-called for in 95 per cent. of all cases presented; it was seldom or

never necessary. So much superior are the results when the deformity is corrected by manipulation that it could be regarded as little short of malpractice to resort to the more radical methods. The time required for the correction of the deformity, even in the adult, is seldom more than three or four months, so that even in the matter of time the more heroic methods find no justification.

The various cases presented were examined by the members present, and congratulations were expressed upon the excellent results secured.

Sewage Disposal.—Dr. John Amyot, of the Provincial Board of Health Department, on the evening of January 10th addressed the Canadian Institute on the subject of sewage disposal. After a careful study of the subject, an examination of the sewage disposal works of the Eastern States and Europe, and a summer of experimental work at Berlin, Ont., his conclusion is that the most effective and most easily managed method of disposal yet found is that of intermittent sand filtration. Regarding the septic tank and bacteria bed system, that has been recommended for Toronto, he said it was a compromise method, not as efficient and far more expensive and more difficult to handle. The bacteria or contact beds, he said, were delicate, living pieces of machinery, with a lifetime of two years, after which they had to be reconstructed. Sewage disposal, Dr. Amyot pointed out, had become a problem of biology, a question of the operation of bacteria. Under certain conditions the microbes in the sewage created ferments, which digested organic matter, and when the work was properly done the effluent passed off nonputrescent. The object of modern sewage disposal methods was to obtain an effluent as nearly fit for drinking water as possible. Dr. Amyot explained intermittent sand filtration by describing the works at Brockton, Mass., where a population of 30,000 disposes of 950,000 gallons of sewage a day on nineteen acres of sandy land. It is divided into acre lots, and drained by ordinary garden tiles four feet below the surface. About 200,000 gallons of crude sewage is turned into each of five beds daily, the nineteen beds being used in rotation. The effluent contains large quantities of nitrates, but no organic matter, and as pure as such a plant could produce. After fifteen years the beds are in better shape than when first used. The plan requires little attention, the chief cost being the pumping, and operates effectively in zero weather. At Clinton, Mass., the effluent from such a plant has formed a spring, which is popular with cyclists, and very nice houses are built and being built around the plant. City Engineer Rust, in his report on sewage disposal, estimates the cost of a system of septic tanks and filter in Toronto at \$2,385,000, and an annual cost of \$76,000.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XIII.

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NO. 2.

Editorials.

ONE OF THE FREAKS OF MEDICAL NOMENCLATURE.

IN Volume XXV., No. 20, *The Literary Digest*, appeared an allusion to a paper read by Dr. Charles W. Stiles at the recent Sanitary Conference of American Republics at Washington. Reference was made in this paper to uncinariasis, a disease said to be prevalent in the Southern States, where, according to Dr. Stiles, it is commonly mistaken for malaria, and is responsible for many of the peculiarities of the "poor whites," including chronic laziness, "dirt eating," etc.

In describing the symptoms of the disease, Dr. Stiles asserted that it created an abnormal appetite for different things in individual cases, and that the "dirt eaters" were almost all sufferers from it. The disease itself, he asserted, was not due to the habit of eating dirt, as some physicians have claimed, but that, reversely, the habit itself was due to the disease. The famous "pickle-eaters" of North Carolina were also sufferers from the disease, and their abnormal and peculiar appetite was the result of a certain stage of the disease.

We are not disposed to discuss the statements made by Dr. Stiles, the value of which will have to be settled by clinical and experimental evidence. In this article we wish to draw attention to the word "uncinariasis."

In the *Literary Digest* it is spoken of as a parasitic disease. Curious to learn what might be the real character of this parasite, we looked for uncinariasis in the *American Illustrated Medical Dictionary*, 1901, but failed to find such a word. Webster's *International Dictionary*, 1902, was also silent on uncinariasis. The etymology of the word suggests a disease produced by hooklets (uncus, a hook). Finally, in an article on diseases of the stomach, etc., which appeared in *Progressive Medicine*, December, 1902, Max Einhorn threw some light on uncinariasis. He says: "As is well known, uncinariasis is a chronic disease due to the infection by a small thread worm, known as the *uncinaria duodenalis* (*ankylostoma duodenale*), which is characterized clinically by intense anemia, dyspnea, weakness, gastro-intestinal disturbances, and in advanced cases by edema of the face and extremities, and serous effusions into the cavities of the body. Dr. Einhorn goes on to say: "It must not be supposed that all those who are infected show symptoms of uncinariasis; far from it, as many are strong and healthy. The weak and poorly nourished are those who are least able to withstand the loss of blood occasioned by the parasite."

Once understood as the equivalent of the ankylostomiasis, the term uncinariasis is intelligible enough. We do not agree with Dr. Einhorn, however, that this fact is well known, and we would refer Dr. Einhorn to the dictionaries already mentioned and to the *Practice of Medicine*, by Anders, Fourth Edition, 1900, where under the heading *Ankylostomiasis*, a description is given of the *Ankylostoma duodenale* (*Doehmius duodenalis*), with the pathology, symptoms, diagnosis and treatment of the disease;

but no allusion is made to uncinariasis. Anders says: "Ankylostomiasis is not uncommon in tropical countries (Italy and Brazil). In Italy it has been termed *tunnel or mountain anemia*; in Belgium it is known as brickmaker's anemia,—again it occurs among workers in coal mines—miner's cachexia. In this country it is rare, although alleged to have been seen in the Southern States. The importation of infected Italian, Hungarian, and Polish laborers may, at some future time, cause the propagation of the ankylosoma parasite in the United States." It is quite evident, therefore, that Dr. Stiles totally differs from this view, as he thinks uncinariasis, the disease produced by the presence of the ankylostoma duodenale, is common in the Southern States. As already stated in this article, the correctness or falseness of Dr. Stiles' theory with regard to the peculiar form of anemia affecting the "poor whites" of the Southern States should be easily settled by an examination of the feces of the anemic patients for nematodes or their ova.

If it can be proved that "dirt eating" in South Carolina, and pathologic "pickle eating" in North Carolina are due to the influence of the ankylostoma duodenale, the correctness of Dr. Stiles' position on this question will have been established. Under such circumstances, he might be allowed the privilege of coining a new name for ankylostoma, since he will have enormously extended the domain of this nematode.

It is different with Dr. Einhorn, who uses uncinariasis and ankylostomiasis in the same terms, only he assumes, what he has no right to do, to give the preference to the former.

We also notice that the editor of the *Journal of the American Medical Association* (Jan. 3, 1903), writes of "ankylostomiasis, or, more properly speaking, uncinariasis."

Writers for the medical press should not use scientific terms with the airs of assured authority until these terms have received the stamp of the best usage.

J. J. C.

EICHHORST'S VIEWS ON THE TREATMENT OF DIABETES.

PROFESSOR EICHHORST announces his latest views on the treatment of diabetes in a communication to the Medical Society of Zurich, which has been published as a recent fasciculus of *Therapeutische Monatshefte*. He places all medicaments under the ban,

as, according to him, salicylic acid, salol, carbolic acid, antipyrin, etc., which have been tried in mild, medium, and severe cases of diabetes, have been all found equally powerless in effecting the slightest diminution in the patient's glycosuria.

He goes further. In a certain number of cases of this malady in syphilitic patients, in whom everything seemed to indicate the existence of a causal relation between the syphilitic infection and the diabetes, specific treatment with mercury and iodide of potassium did not nullify the glycosuria to the slightest extent.

He even goes so far as to say that medicines are positively hurtful in this malady, inasmuch as they furnish the diabetic patient who trusts in their efficacy, a pretext for following his dietetic regimen less closely than he ought to.

Eichhorst has no faith in the use of mineral waters as a cure for diabetes. He admits that after a season at Carlsbad or Neunahr diabetic patients observe a considerable diminution in and occasionally a complete absence of sugar from their urine. This result, however, he attributes to the rigorous dieting to which these patients are obliged to submit during their stay at these stations, so much so, that equally good results might have been obtained in their cases if they had followed a suitable diet at home.

He does not advise alcohol in diabetes. As calorific agents, he prefers butter, lard, cream, ham, smoked salmon, fatty cheese, sausage, which have the advantage of introducing a certain amount of variety into the patient's diet. As a beverage, he orders plain water or an alkaline water, to which some lactic or citric acid has been added, and even whole milk, in spite of the fact that it contains sugar of milk. Weak coffee and tea are permissible. As to cocoa, it is necessary before ordering its regular use to ascertain if it increases or not the glycosuria.

The well-known dietetic treatment, which it is unnecessary to describe, is, according to Eichhorst, the only rational treatment of diabetes. Cases differ, however, and the method of placing a diabetic patient under such a regimen is not the same for all.

Should the strict dietetic treatment be commenced immediately or gradually?

Eichhorst prefers to go slowly. In some cases he has observed that the sudden deprivation of farinaceous food and sugar has provoked serious digestive troubles, emaciation, and the appearance in the urine of diacetic acid and acetone, which indicate the evolu-

tion of an auto-intoxication leading in the direction of diabetic coma. None of these phenomena appear when the physician diminishes gradually the quantity of sugar and carbohydrates in the patient's diet, and gives the organism the time, so to speak, to adapt itself, little by little, to the new conditions of alimentation.

It sometimes happens that the total privation of sugar and the carbohydrates is badly borne by the patient, who becomes alarmingly thin. Eichhorst allows such patients small quantities of bread and sugar, for, in his opinion, a diabetic patient in fairly good health, with a small quantity of sugar in the urine, is preferable to one who loses flesh and strength, although his urine may be sugar-free. Eichhorst weighs his patients regularly, the scales being, according to him, the best means in the hands of the physician for learning how his patient stands the diet he is obliged to use. A diabetic patient who has lost flesh ought to hold his own after his diet is suitably arranged, and if the scales show a fresh loss of weight, the rigor of the diet must be lessened.

Briefly expressed, Eichhorst's teaching is that, in the treatment of diabetes, the first point to attend to is the PROGRESSIVE establishment of a special diet, the effects of which ought to be controlled at intervals by weighing the patient; the second is to eschew all medicaments, alcohol included.

J. J. C.

PROFESSOR LORENZ IN NEW YORK.

THE celebrated German orthopedic surgeon, Dr. Lorenz, came to New York on Monday, the 15th ult., and since that time has been busily occupied holding clinics in various places; at Cornell Medical College, at the Hospital for Ruptured and Crippled, at the Hospital for Cripples on East 59th Street, at Beth-Israel and other institutions.

The visit of Lorenz to New York was hailed with a mixed feeling of cordiality and prejudice. Many have regarded the visit of this surgeon as little else than a boom to exploit some unheard of impracticable procedure, others believed that he could teach us much that was original with himself, that he was a real benefactor, in the broadest sense of the term, inasmuch as he made no secret of his methods and invited his professional brethren to come and judge for themselves.

Since he came to New York he has departed from an iron-clad rule up to this time. He here has not confined himself to reducing congenital dislocation of the hip, but has also operated on club-foot, in several aggravated cases.

We were somewhat disappointed about his physique, as we were led to believe that he was of a large, heavy frame, with a ponderous muscular development, while, on the contrary, we find him a man about six feet in height, of rather a spare build, what some would call "wiry." He speaks English with remarkable clearness and facility, usually reading from manuscript when describing techniques.

On Friday evening he was entertained by the Academy of Medicine. The sceptical attitude of the profession was made manifest on this occasion, and, as the membership is made up mostly by leaders in the profession, the sparse attendance was noteworthy. About one-half the audience was made up of non-members, and yet the main hall was not filled. The exercises opened with a paper by Professor Lorenz. This was full of interest and rich in suggestion to those who closely followed him.

1. He made it clear that he was a "dry operator." He deprecated sanguineous surgery, or "any description of operative procedure that imperilled the life of a patient." The loss of blood, he alleged, was always serious in its consequences on young children.

2. The real steel of the man was made evident when he warned against the too ready practice of putting hips, the seat of disease, too early in fixation apparatuses. He showed that if we would do the best for these cases we would let nature have a chance, asserting that "if we would take a typical case in its early stages, feed the child well and do nothing at all, it would come out as well, if not better, than the one placed in fixed adjustments." That brings us back to just where we were fifty years ago, and is, no doubt, in a large measure not far from the fact.

3. In hip-joint disease he warned against any apparatus that might impede the circulation. "Good, solid anchylosis at the hip, with a free knee and ankle, was the best we could look for in severe cases." Protracted extension he disapproved of.

4. He would discard the scalpel absolutely in wry-neck and in club-foot, as in these cases, no matter how aggravated, manipulation and simple corrective measures will suffice.

5. He said that he purposely passed over the procedure of hip-reduction, as he thought he had amply discussed this at the clinics held.

There is no question but Professor Lorenz is an orthopedist of most remarkable skill, and one profoundly learned in the science of medicine; this both his clinics and his essay clearly prove; but he is a broad man as well, and distinctly states that he expects and requests free criticism.

In the discussion which followed his essay at the Academy, it was noteworthy that, although such veterans as Drs. Gibney, Schaffer and Whiteman participated, not one touched on the procedure for the reduction of congenital dislocation, the nearest reference to it was when Dr. Gibney spoke of "Professor Lorenz's method for overcoming deformities of the hip."

Lorenz is noted in his specialty at home and evidently one of the few who raked the shekels in early. He is now but 46 years old, the same age as Dr. John B. Murphy, of Chicago, and he says that at fifty he intends to pull out and retire. Just how to estimate the value of the work done by this German surgeon in America during his present visit is at this date quite impossible. He has reduced bones without joints, "everyone in the room hearing them shoot back into place," and so he has "unfolded club-feet, bringing the rigid, rolled-up mass of bones to the consistence of a soft towel," but these are now, and will be for some time to come, like the doctors' mistakes, well buried from sight, till long after the learned professor reaches Fatherland.

So far he has prudently declined to tackle cases of torticollis; but he is expected to cure this again in another tour of teaching, when he may be prepared for hot-shot if his methods are found to be no improvement on many others, at least well tried and better known.

T. H. M.

PROFESSOR LORENZ.

THE visit of Dr. Lorenz to various American cities and his tour across the continent from the Atlantic to San Francisco, is an event of an unusual kind in the medical world. The writer knows of nothing like it since the time when the late Dr. Lewis A. Sayre toured Europe addressing the profession on orthopedic subjects,



PROFESSOR LORENZ'S CLINIC AT THE HOSPITAL FOR THE RUPTURED AND CRIPPLED.

From New York Medical Journal.

especially on the method of applying and using his plaster-of-Paris jacket.

Adolphe Lorenz is 46 years of age, was born, the son of a watchmaker, in a small town in northern Austria; is spare, erect, more than six feet in height, has a flowing beard, and the characteristic Teutonic hair. His appearance and bearing make him a striking personage whether upon the street or in any assemblage. In manner he is polite and genteel, in the expression of his opinions he is clear and decided and yet modest and unobtrusive. He has more than a good working knowledge of English, French and Italian; he speaks his mother tongue with great force and fluency.

Though he received one large fee in Chicago, and though he doubtless received fees for operating upon a number of other private patients, yet it is doubtful if he carries back to Europe with him as much as he would have made in the same time at home.

Lorenz graduated in medicine from the University of Vienna in 1880, and was appointed clinical assistant to Prof. Albert, whose lectures in surgery are so pleasantly remembered by many American surgeons; his ability and work were held in high esteem by his chief, and to young Lorenz there seemed open a brilliant career as a general surgeon.

The time was ripe, however, and the need was great for some master hand and master mind to raise the status of orthopedic surgery in Europe. In the early eighties it was held that nowhere outside of New York had orthopedic surgery attained to the dignity of a specialty.

Like all successful workers, he is a man of method and diligence; living at Altenberg-Greifenstein, twelve miles from Vienna on the banks of the Danube, he rises shortly after six o'clock, takes a simple breakfast, and, accompanied by his wife, reaches the sanitarium in the city, where shortly after eight o'clock he is ready for operations on private patients; he holds a clinic at the University from 9.30 to 11; sees private patients at his office till one; attends to the after treatment of patients and to the work of his gymnasium till six o'clock, when he returns to his suburban residence on the banks of the blue Danube. Such is an ordinary day's work for Dr. Lorenz.

To Prof. Hoffa, now in Berlin, but practising in Wurtzburg in 1890, is due more than to any other the credit of bringing into

prominence operative relief for congenital dislocation of the hip. Lorenz followed Hoffa for some time, but soon introduced a modification which was known to orthopedic surgeons as the Hoffa-Lorenz operation. Two serious objections presented themselves to a method depending upon the making of so large a wound; there was a considerable mortality and the successes were but partial. One good purpose, however, was served: the pathological anatomy became much better known. This prepared for an advance step; he began to practise and advocate operation for the relief of congenital dislocation of the hip by manipulation—his “bloodless method.” He had performed about two hundred operations by the “open method,” but has since adopted the more conservative plan, and has operated nearly a thousand times without the use of the knife.

From newspaper accounts one might conclude that he professed to cure all cases of congenital dislocation which have the good fortune to be subjected to his magic touch. It need scarcely be stated, however, in a medical journal that no such claim is to be attributed to him. The time is not yet ripe when he or others may judge fairly what will be the ultimate results of his work. When asked plainly, however, how many cures he expected to have, he said, “probably twenty-five per cent. of those who have double congenital dislocation will be cured, and fifty per cent. of those who have only one hip so affected.” He added significantly, however, “perhaps the results will be even less satisfactory.”

It need scarcely be added that when the final results are not such that a cure could fairly be claimed, the cause is found not in the operator, but in the nature of the difficulty which exists in the bones which make up the joint. Anyone who has examined a number of specimens will see how utterly impossible it is to attain success in the majority of cases.

Lorenz is in no way responsible for the exploiting that is done by the newspapers. Their methods make such a regretful notoriety and unavoidable result consequent upon such a visit to this continent. The laity are ready to believe him a divine healer, or one endowed with the magic touch.

A professor in the University of Vienna, a diligent worker in his chosen specialty, Lorenz finds himself struggling with the same problems that others are grappling with, and realizes that

many of them are still unsolved. He is the last man to claim that he is doing more than others can do or are doing. He distinctly said that he had nothing to teach many of the American surgeons who are doing the same kind of work that he is doing. Whatever stigma some may be disposed to attach to his name because of the attitude of the American press, it must be said of Prof. Lorenz that his visit to America will impart a useful stimulus to orthopedic surgery in this country, and that he has placed many American surgeons under obligation by the numerous clinics which he has conducted and to which they received so cordial an invitation.

B. E. M.

THE NEW BUILDING OF THE FACULTY OF MEDICINE OF THE UNIVERSITY OF TORONTO.

THE new building for Medicine has been erected on the University grounds. It will provide extensive accommodation for the students of the Faculty of Medicine of the University of Toronto, and none too soon, as the increasing numbers can no longer be provided for in the laboratories, which were sufficiently large five years ago.

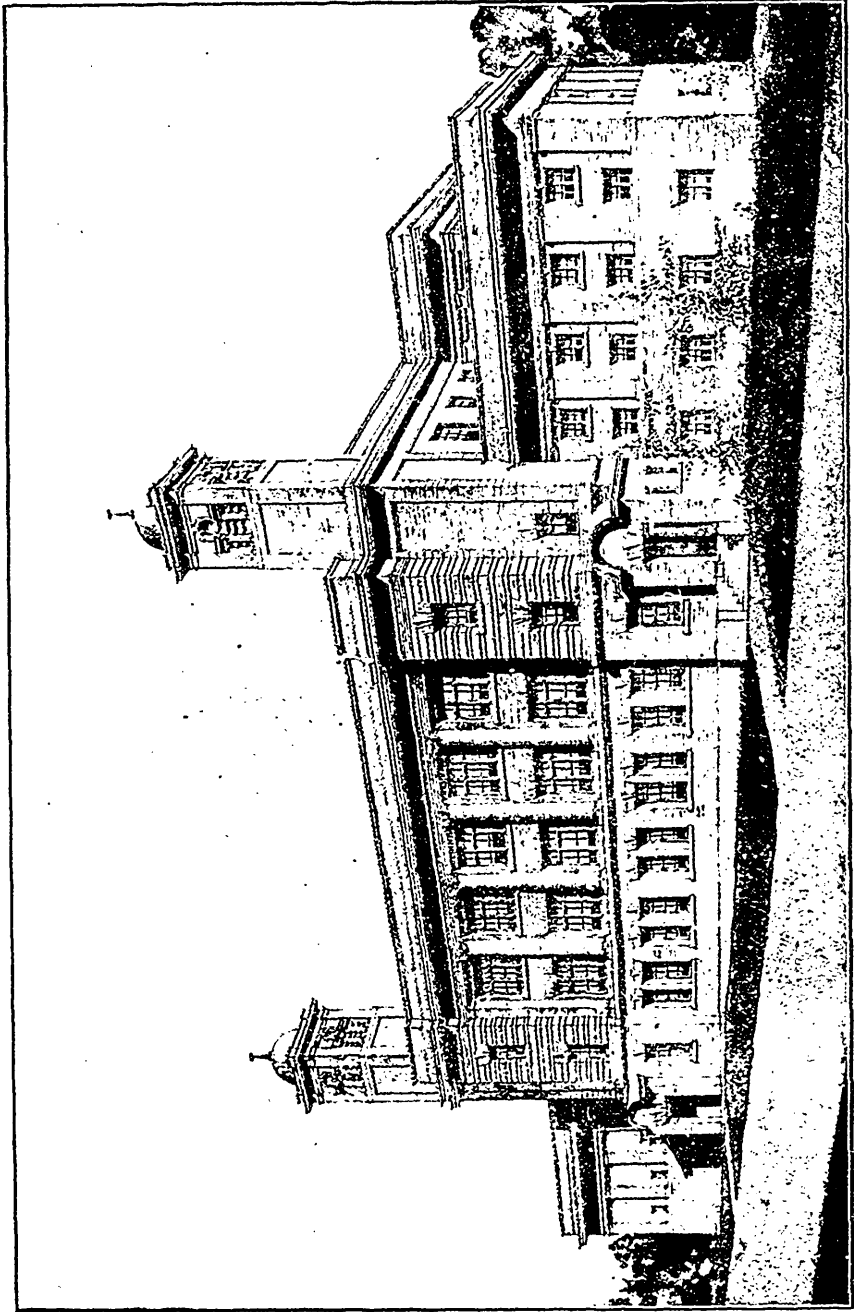
The laboratories are arranged in what has been called the unit system. The unit is a room 30 feet long, by 23 feet wide, with excellent light provided by two very large windows. Each unit is arranged to accommodate 24 students, comfortably seated, and there are no less than 30 of these units in the building.

This building, which cost \$125,000, is situated between the University Library and the anatomical wing of the Biological Department.

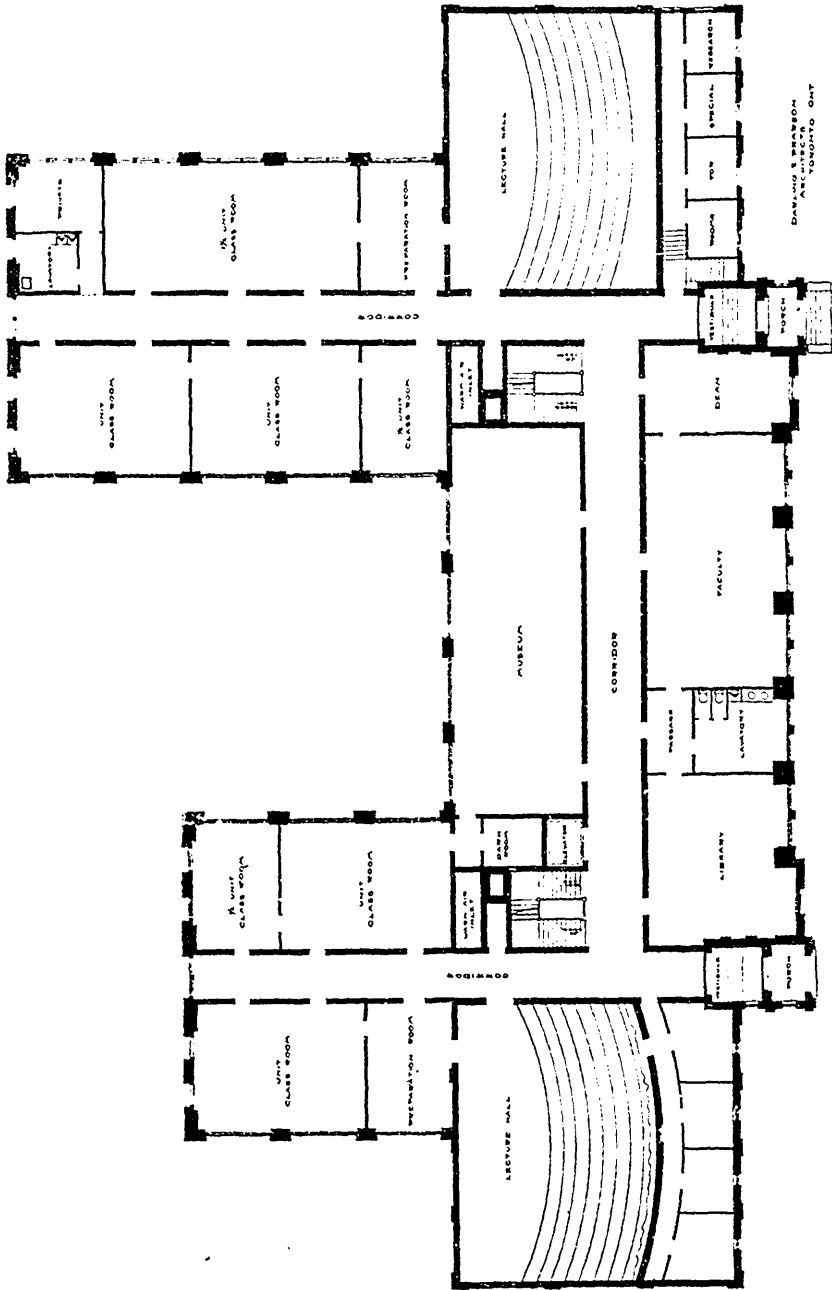
It is three storeys in height in front, with an additional storey and sub-basement in the wings, which extend eastward. Two large lecture rooms are provided, which flank the main building; the larger has accommodation for about three hundred and fifty students; the smaller for about two hundred students.

In the south wing, in what may be called the basement storey, are situated the caretaker's quarters, lavatories, recreation rooms and reading rooms for the students; in the same storey in the north wing is placed a large museum of hygiene.

The three main floors of the building are arranged upon the unit system. These rooms may be united so as to form large la-



THE NEW MEDICAL BUILDING, TORONTO UNIVERSITY.



GROUND FLOOR PLAN
THE NEW MEDICAL BUILDING.

DRAWING BY
ARCHITECT
TORONTO ONT

laboratories, or may be cut in two where it is necessary to have smaller rooms.

The south wing is to be occupied by the Arts Department of Physiology, whilst the main portion of the building and the north wing will accommodate the final departments of Medicine.

On the ground floor, in the main portion, are situated in front the Dean's room, a large Faculty room, a lavatory and a library, behind is placed a large pathological museum.

In the north wing on this floor will be placed a chart and preparation room back of the lecture theatre, preparation and store rooms for the pathological museum, and laboratories for gross pathology.

The second and third floors in the same wing and in front will contain the laboratories of pathological histology and bacteriology with rooms for the Professor of Pathology and demonstrators, and unit rooms for small special classes.

In the north wing on the third floor three units will be rented by the Provincial Board of Health for its bacteriological and chemical laboratories.

An interesting feature of the building is the provision which is made for research students by the presence of a series of small rooms in front of the south lecture room, each large enough to accommodate one or two workers.

The ventilation is to be of the most modern type, and each room will be provided with both gas and electric light.

The building is in every way to be thoroughly up to date, and in the extent of window light for the laboratories will probably be unique on this continent.

EDITORIAL NOTES.

Oil of Cedar in Therapeutics.—The essential oil of *Cedrus Atlantica* or Libanol, as it has been named by Dr. Huertas, is a transparent, very fluid liquid, of a lemon yellow color, agreeable to the taste and smell, and causing when swallowed a slight but not persistent irritation of the throat. It is soluble in oil and ether in all proportions; soluble in 90 per cent. alcohol in the proportion of one to five parts. It is insoluble in glycerine and water. It is slightly antiseptic, and in no way toxic. It is best given in gela-

tine capsules, containing 25-50 centigrams. In general the daily dose for an adult should not exceed 3 grams. Observers have remarked that it is eliminated from the economy almost exclusively of the urinary and respiratory passages. It has been employed by Dr. Gemy, of Algiers, as a substitute for santal oil. His experiments extend over two years, and he declares that not only has libanol proved as useful as santal oil and the other balsamics, but that it enjoys one advantage over them, of never exerting a hurtful influence on the kidneys or the digestive tract. In the doses mentioned (3 grams a day) he has observed a rapid diminution of the pains and purulent discharge in urethritis, so that he has been enabled to commence the permanganate injections after about a week's treatment. The same fact has been observed in cases of cystitis. Dr. Huertas says that in cystitis treated by libanol he has seen the pain disappear after the first doses, the urine clear rapidly and micturition become less frequent. In diseases of the respiratory passages it liquifies and transforms the bronchial secretions, eliminating purulence and malodor, when these latter conditions exist. Libanol appears, therefore, to be particularly indicated in chronic bronchitis and pulmonary tuberculosis. It may be associated with cod liver oil (20 or 30 grams to the litre), and it so masks the disagreeable taste and odor of the latter that it can be taken in summer and winter without intolerance even by persons who have very weak stomachs.

The Phosphates and Fats in Brown Bread.—Analysis of a scientifically made brown bread by Andour, Paris, shows that its nutritive qualities are superior to those of a high-class white bread :

	Brown Bread.	First Class White Bread.
Proteids.....	10.25	6.75
Fats.....	5.02	0.8
Soluble Dextrine.....	10.61	3.43
Starch.....	49.75	50.37
Mineral Salts.....	2.13	0.4
Water.....	22.24	38.25
	100.00	100.00

The grams 2.13 of mineral salts found by analysis in the brown bread would not be assimilated if they were prepared chemically. They are assimilable, however, owing to their vegetable origin, and, besides, they take on during panary fermentation new and more

active properties, similar to those presented by certain bodies in the nascent state.

The relatively large percentage of fats in brown bread would lead one to think that it might prove heavy and hard to digest; but it is said that the fats contained in it are remarkably easy of digestion owing to the extreme division of the contained fatty molecules. The fats make this bread friable and crumbly, so that it melts in the mouth and is easy to chew.

Armed Expectation in Appendicitis.—From the standpoint of the surgeon, every appendicitis belongs to the domain of surgery. It does not necessarily follow, however, that a surgeon called to see a case of appendicitis should operate immediately. According to his convictions or his appreciation of the case at the moment he sees it, he may pronounce in favor of an intervention, or he may temporize. This might be called an attitude of armed expectation. Dr. Reynier, Paris, who advocates this view, after comparing the statistics of interventionists and abstentionists, shows that the death-rate of the former in appendicitis is much higher than that of the latter. He, therefore, concludes that the rational treatment of appendicitis does not consist of an immediate intervention in every case, but rather inopportunist of a medical character, as long as the disease follows a normal course, but becoming surgical when well-marked indications demand it. His medical treatment of appendicitis is: Rest in bed, abstinence from solid food, opium, injections of serum, and the ice poultice over the abdomen. The ice poultice ought to be removed, night and day, at least every three hours. This treatment should be closely watched by the surgeon, who will be thus in a position to judge of the complications, which necessitate an operation, and to prevent a tragical ending of the case.

Permanganate of Potassium in Tubercular Ulcerations.—Solutions of permanganate of potassium, of varying strengths, are recommended by Dr. Bayaux, Paris, in the treatment of tubercular ulcerations and abscesses. In treating recent fresh ulcerations covered with granulations, he uses a concentrated solution (1-50), which he applies by means of a piece of sterilized gauze. For deep foci, which require vigorous treatment, he uses a solution of the strength of 1-100. In cases of chronic abscess he has employed advantageously solutions of permanganate of potassium

1-500 and 1-1000. These solutions are applied three times a week, but, in the opinion of the author, might be used with still more advantage, if employed every day. In dressing cold abscesses, he uses compresses of sterilized gauze, steeped in a solution of permanganate of potassium of the strength of 1-1000, which have given excellent results in maintaining the aseptic condition of the skin.

Sewage Disposal at Berlin, Ont.—From experimental laboratory work done at Berlin, Ont., by Dr. Amyot, bacteriologist of the P. B. H. during the summer of 1902, the following results were obtained:

AVERAGE RAW SEWAGE.		Parts per million.
Albuminoid Ammonia.....		2.017
Free Ammonia.....		2.542
Oxygen Consumed.....		49.95

AVERAGE SEPTIC TANK EFFLUENT.		
Albuminoid Ammonia.....		1.057
Free Ammonia.....		2.223
Oxygen Consumed.....		32.

BEST AVERAGE OF CONTACT BEDS, USING SEPTIC TANKS' EFFLUENT.

Albuminoid Ammonia.....	.596
Free Ammonia.....	1.562
Oxygen Consumed.....	16.43

Dr. Amyot thinks that if the effluent from the contact beds at Berlin were pumped onto suitable land and disposed of by means of intermittent downward filtration, the resulting effluent would then be quite innocuous, and might safely be discharged into a stream.

J. J. G.

A Carbolyzed Poultice.—The flax-seed poultice is not quite abandoned in the treatment of painful lesions, though, owing to the rage for antiseptic dressings in surgery, its use is principally confined to the laity. In a communication addressed to the Therapeutic Society of Paris, Dr. Cammescasse stated that, having to treat a patient who had a contusion and multiple excoriations on one of his legs (with redness, swelling, acute pain, lymphangitis and high fever), he ordered a large flaxseed poultice to be applied to the affected parts. In making the poultice, water containing a small percentage of carbolic acid, 1-200, was used. The patient improved rapidly. He claims to have treated successfully with

the carbolized poultice a case of dermatitis and lymphangitis consecutive to a blister on the heel, and also several other infected injuries of a superficial character.

Urotropin as a Urinary Disinfectant.—After the internal administration of urotropin this substance can always be found in the urine within a short time. Likewise formaldehyde can always be found in acid urine, and the reaction is the more distinct the more pronounced the acidity of the urine. The growth of bacteria is almost entirely prevented, although the bacterium coli exhibits sluggish growth even in the urine containing formaldehyde. At first this failure of growth depends only on inhibition, while the bacteria retain their viability. After prolonged action of the formaldehyde, however, actual destruction of the bacteria takes place. Here again the bacterium coli is the most resistant of the organisms.

PERSONALS.

DR. W. A. YOUNG returned a week ago, after visiting Detroit, Chicago, and St. Louis.

DR. A. O. HASTINGS, of Sherbourne Street, made a flying trip to Boston, Mass., last month.

CONGRATULATIONS to Dr. and Mrs. Clarence L. Starr, of Toronto, on the birth of another heiress.

WE are pleased to know that Dr. R. J. Wilson, of Bloor Street West, has quite recovered from his recent attack of typhoid.

DR. JAMES M. MACCALLUM, of this city, spent three weeks last month with his nephew at Hamilton, Bermuda, and returned greatly improved in health.

DR. GEORGE ELLIOTT, of John Street, has bought out all title and interest held by the Nesbitt Publishing Co., Limited, in the *Dominion Medical Monthly and Ontario Medical Journal*, and published his first issue on the 15th ultimo. We wish the doctor good luck.

THE annual dinner of the staff of this Journal took place at the Arlington Hotel in this city, on January 7th, and was a distinct success. The evening was particularly enjoyable, about 40 sitting down at the table. Music was rendered by Napolitano's orchestra. Over and above the members of the staff, a few outsiders were amongst the guests.

Obituary

DEATH OF DR. A. Y. SCOTT.

DR. ARCHIBALD YOUNG SCOTT, professor of chemistry and botany at the College of Pharmacy, died at 1.30 a.m. on January 3rd, at his home, 2 Lamport Avenue. His death was due to heart trouble, which followed an attack of typhoid fever, which he suffered two years ago. The Saturday previous, while engaged in conducting a lecture, he was seized with a fainting spell. He was taken home, and from the first his attendant physicians knew that he could not recover.

Dr. Alexander Young Scott was born in Stratford in 1861. He was educated at the University of Toronto, and graduated in natural science in 1882. The same year he was appointed to a position on the staff of Upper Canada College, and while still engaged in teaching he resumed his studies and received his degree in medicine at Trinity University in 1887. After leaving Upper Canada College in 1891 Dr. Scott was appointed professor of botany and chemistry at the College of Pharmacy, and held that position up to the time of his death.

Dr. Scott was probably best known in military circles. He obtained his early training with the old University Company, and in 1885 commanded the left half battalion of C Company, R.R.C.I., in the North-West Rebellion. A few years ago, when the Army Service Corps were organized, Dr. Scott took an active interest in the movement, and was gazetted Major of No. 4 Field Hospital Company. Dr. Scott was also well known to summer residents of Muskoka, where he spent his annual vacations. He was a prominent member of Ashlar Lodge, A.F. & A.M., being a Past Master, and also a member of the Granite Curling Club.

Dr. Scott is survived by his widow and two sons, aged 10 and 12 years. He also leaves a sister living in Rochesay, Scotland, and two brothers, Lawrence, of New York, and William, a private banker at Oshkosh, Wis.

The funeral, which took place on January 5th, was largely attended by medical men, friends of deceased, as also by the members of his regiment, who turned out in full uniform.

The Late Angus C. McDonnell, M.D.—Dr. Angus C. McDonnell, one of the leading physicians of Montréal, died on January 2nd, aged 74. Dr. McDonnell was a son of a former chief factor of the Hudson's Bay Company and Governor of Fort Temiskaming. He was a graduate of Toronto University, and was for twenty years on the consulting staff of the Hotel Dieu.

Death of Dr. H. W. Day.—Dr. Henry W. Day, Registrar of the County of Hastings, died on January 10th, at Belleville, Ont., after an illness of several days' duration. Deceased, who for many years practised his profession at Trenton, was appointed registrar about twelve years ago. He was in the seventy-second year of his age, and was widely known and much respected. In politics he was a Liberal, and he was long prominent in the Masonic Order.

Dr. W. S. McKay's Death.—Dr. W. S. McKay, physician in charge of the hospital at the Superior Lumber Company's camp, was found dead in bed at the camp on St. Ignace Island on the 7th ultimo. The body was brought to Port Arthur and forwarded to Ingersoll, Ont., where his wife and brother live. Dr. McKay had been in that section for a year, devoting his services to lumber camp hospitals. It is supposed that his death was caused by an overdose of morphine. He was 35 years of age.

Of Interest to Coroners.—The cable reported the death of Ellen Gore in Paris from a bullet wound in the eye, and the arrest of the man who was alone with her at the time. The man has since been released on the sole ground that the lids and lashes of the eye penetrated by the bullet were intact. The medical experts, Socquet and Brouardel, testified that there was every probability that the injury was due to an accident, as the victim of an attempt to murder would naturally close the eyelids, or at least they would flutter more or less. The fact that they were intact in this case, they said, indicated that the victim was tranquil at the moment the ball struck her.—*Journal A.M.A.*

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

DELAYS ARE DANGEROUS.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

DEAR EDITOR,—I would like to ask about our Medical Health Office. I sent a swab taken from a throat (suspected diphtheria) on Saturday afternoon at 3 p.m., and I find then that the office closes at 1 p.m. on Saturday, and nothing can be done till 9 a.m. Monday, and then it will be Tuesday forenoon before I can have a bacteriological report on the case, too long altogether. These things ought to be attended to without any unnecessary delay, and I feel strongly the necessity of having the office open all the time and a competent man in charge to attend properly to such things. It may cost a few hundred dollars per year more, but it would be worth it. I have had the same experience before, and I have no doubt the other medical men in the city are frequently inconvenienced in the same way. Yours,

J. A. TODD.

Nurses' Home.—The capable and energetic ladies who compose the Managing Board of the Toronto Western Hospital, gave a poster show in the basement of Massey Music Hall last month, and netted the handsome sum of \$1,000, which is to be devoted to the building of a nurses' residence, of which the hospital is urgently in need.

Hospital of Glass.—It is planned to erect a consumptive hospital near Bayview, Md., for the housing of patients who are suffering with this disease. It is said that conditions at the asylum are really alarming, and that even the physicians who come in contact with inmates express fear of contracting consumption. The scheme is to construct a large hospital of glass and steel. "This," said Comptroller Smith, "will be a great 'hot house' for human beings. It is to be arranged so that the consumptives will be enabled to get fresh air and be shut in when the weather is unfavorable."

Items of Interest.

The First Crematory in Australia is in progress of construction.

The Fifth International Congress of Applied Chemistry will begin its sessions in Berlin, May 31, 1903.

A New Emergency Hospital has been opened in the Fitch Institute, Buffalo. A ward of eight beds is in readiness for the reception of "accident" cases.

Antitoxin in Austria.—By order of the government of Austria, every drug store in that empire must keep diphtheria antitoxin on hand and sell it below cost.

Polk's Medical Register.—The eighth revised edition of this well-known work is now under way, and will appear in due time. Send for descriptive circulars, and do not be deceived by imitators. Polk's Medical Register and Directory has been established sixteen years. R. L. Polk & Co., Publishers, Detroit, Mich.

Western Hospital Nurses.—The following graduates of the Training School for Nurses of the Toronto Western Hospital, have been appointed as lady superintendents or head nurses of the following hospitals: Mrs. Annie Yorks, Orthopedic Hospital, Toronto; Miss Mabel Ireland, Eye and Ear Section, Manhattan Hospital, New York; Miss Annie Inch, Stonega Hospital, Virginia; Miss Estella Gunn, Royal Alexandria Hospital, Fergus; Miss Pauline Ottaway, Aberdeen Hospital, New York.

New Wing for St. Michael's.—St. Michael's Hospital is to have another new wing. For this purpose the two lots adjoining the hospital property on the north side have been purchased. One of the lots was bought some time ago, and the deal for the other, owned by Charles M. Henderson, was closed recently. The houses will be remodelled and used as the maternity ward, which at present occupies space upstairs in the south part of the hospital, which space is needed for additional accommodation in the surgical department. Later, a building will be put up connecting the new maternity ward and the hospital proper. There are about 150 patients in the hospital at present, but recently the number was as high as 170, and patients have had to be turned away because no room could be found for them.

Quarter Million for Hospital.—The London Hospital for Sick Children has received \$240,000 from William Waldorf Astor to build a new out-patient department.

Physicians on Mecca Pilgrimage.—The Egyptian government will have pilgrims from that country to Mecca go in a body with an escort of physicians to guard against the bringing back of the plague and to care for the health of the pilgrims on the trip.—*Medical News.*

A Galloping Medical Corps.—Sir Frederick Treves, speaking at Manchester on New Year's Day, indicated a weak spot in the army medical service. This was the absence, he said, of a following field outfit to follow a rapidly moving cavalry corps. It was a problem that must be solved, but it would be exceedingly expensive to the country.

Medical Correspondence in America.—Dr. Francis Munch has been sent to this country by the *Semaine Medicale*, of Paris, as special correspondent to write up the "*mouvement actuel de la science medicale*" in the United States. His first letter appears in the issue for December 24, and deals with Boston and Philadelphia, principally devoted to the work in radiotherapy by Williams, Ellis, Sweet and Rust.—*Ex.*

A Further Addition to Our Staff. It is a great pleasure to us to be able to announce to our readers that our staff has had a recent addition made to it in the person of Dr. Campbell Meyers, of Deer Park Sanitarium. Dr. Meyers is too well and favorably known to the Canadian profession to require any introduction, having for years taken a foremost place as a neurologist. The doctor has kindly consented to contribute to our department of Nervous and Mental Diseases, so that our readers may look for the very best material on those subjects from time to time.

A New Physicians' Supply House.—Our readers will notice the advertisement (on page x.) of The Chemists and Surgeons' Supply Co., of 818 Dorchester Street, Montreal. This firm recently opened up an exceedingly handsome store on the most fashionable of Montreal's streets, with a very complete stock of physicians' supplies, college and hospital supplies, including a full line of bacteriological apparatus, clinical thermometers, hypodermic syringes, chemical apparatus, etc., in fact everything required by a physician, surgeon, hospital or college. The company has been fortunate in securing the services of Mr. Chas. L. Walters, who for many years acted as manager of the surgical instrument department of Lyman Sons & Co., of Montreal. The firm have a catalogue in course of preparation, meanwhile a postal card to above address will bring a prompt reply.

In the Journal of the American Medical Association (January 10) is an article entitled, "A Study of Sir James Paget in His Writings," by Helen G. Putnam, A.B., M.D., that is very interesting, especially by those who may have had the pleasure of perusing "The Memoirs of James Paget," edited lately by his son.

Index Medicus.—It has been announced that the trustees of the Carnegie Institute, Washington, will appropriate \$10,000 annually for publishing the *Index Medicus*, which ceased to appear several years ago. The annual subscription has been fixed at \$5.00. It is understood that Dr. Fletcher, of the Army Medical Museum, will edit the publication.—*Philadelphia Medical Journal*.

The Forbes' Sterilizer.—It will be interesting to note that, so excellent has the Forbes' sterilizer been shown to be in providing large quantities of pure water at such places as factories, public buildings, railroad stations, etc., the Pennsylvania Railroad Co., owners of the greatest length of railroad track in the world, have recently ordered two Forbes' sterilizers for the Union Station, Pittsburg, Pa., each one to have a capacity of 10,000 gallons per day. The reason that this immense corporation has taken this step is because there has been much sickness of an enteric type among the clerks in their employ at Pittsburg. Other filters had been tried, but it was found, on examination of the water after it had passed through them, that it was not by any means as pure as it was claimed it would be, thus accounting for the sickness prevalent. The Forbes' sterilizers are therefore to be used to sterilize the water after it has been clarified by the filtration method.

The Late Mr. John Carnrick, New York.—By the death of Mr. John Carnrick, the ranks of the pioneer drug trade in the United States have lost their former leader. He was born in 1837, and at the age of 24 he took up the study of pharmacy in Jersey City, and was among the first to bring out proprietary medicines, together with the manufacturing of drugs for the physicians. Among the first that came from his tutored hands was Lacto-Peptine, followed by Maltine, and later Liquid Peptonoids and Panerobilin, as well as others not here enumerated, and as these were in line with the present medical inquiry, he still more closely devoted himself to this special pharmaceutical work, selling the general line of the drug business to Park, Davis & Co., so that his time might be given wholly to research. Working along these lines, overcoming the faults of the old and bringing out new facts, which scientific research had brought to him, he developed Protonuclein, Peptenzym and Trophonine, which have received the world-wide approbation of physicians. About five years ago, feeling the strain of manufacturing, with its untiring demands, he sought other lines and left the business in which he was so long

associated and had become so well known to the profession. The old firm of Reed & Carnrick still retained his name, and by the instillation of new blood have brought to perfection his later products. While the name of John Carnrick is better known to the former generation, the children fed on Lacto Preparata, invalids on Maltine, those in acute diseases saved by Protonuclein, and the dyspeptic cured by Peptenzyme, all unite to praise their author, who, although not known to them, has raised the drug trade to its present high standard.

Rich Men Plan a Lorenz Hospital.—The filing at Albany of an application for papers of incorporation for a charity hospital assures New York City of an institution for the cure of deformities after the Lorenz method. The papers filed recently give the name of the institution as the Lorenz Orthopedic Charity Hospital. Shortly before the first visit of Dr. Lorenz to this city the establishment of a hospital to follow his treatment was suggested to Dr. Sylvester by W. S. Brewer. Dr. Sylvester was at one time assistant professor at the Post-Graduate Hospital, and his specialty was congenital deformities. Both Mr. Brewer and Dr. Sylvester saw Dr. Lorenz at work while he was in this city. The number of unfortunates brought to light during the great surgeon's visit gave proof of the need of an institution for the treatment of such cases. When the institution has been incorporated a meeting of the incorporators will be held and definite plans for the hospital will be made public. Dr. Lorenz will be consulted as to the appointments for the hospital. Temporary quarters will be procured and the work will be started at once. Many wealthy men are interested in the work, and have assured the incorporators of their financial aid. Several prominent physicians have volunteered their services.

Scientific Accuracy in the Lay Press.—What sort of paper does a physician want in his house? Not one whose columns are at the service of every charlatan who is clever enough to exploit himself through the ignorance—or worse—of its editors and proprietors, which is filled with pseudo-scientific tales of impossible operations and sensational “discoveries” that make the judicious grieve. In a time when the lay reporter is the butt of the jokes of the medical press, the *Tribune Review* is quoted with respect by medical journals, and the accuracy of its editorial statements on scientific matters is attested by so high an authority as Lord Kelvin; while Professor W. T. Spillman, the discoverer of Mendel's law, says that “the reason the *Tribune* is quoted so widely, and especially on scientific subjects, is that it is invariably so accurate.” The *Review* gathers and sifts for you every week the world's history, and serves it up with lucid comment. That publication, for the subscription price of \$1 a year, places at your

service the trained abilities of the corps of correspondents (in this and foreign countries), editorial writers, literary, musical, art and dramatic critics, who co-operate in the making of a great metropolitan daily paper, which would cost you \$10 a year if you had it delivered to you every morning. The *Review* is an educational paper in the best sense. Not only are its general features such as to make it an admirable adjunct in the formation of character and opinion, but it contains special features of interest to parents and teachers. For example, a series of articles entitled "Careers for Young Americans" is now running in its pages, including the following papers: "Railroading," by George H. Daniels, general passenger agent of the New York Central Railroad; "Journalism," by St. Clair McKelway, editor of the *Brooklyn Eagle*; "The Stage," by A. M. Palmer; "Architecture," by Thomas Hastings, of Carrere & Hastings; "Engineering," by a prominent engineer; "Medicine," by Dr. D. B. St. John Roosa, president of the Post-Graduate Hospital, New York City.

Enno Sander Prize, 1902-1903.—The essayist securing first place will receive a gold medal of the value of one hundred dollars. The essayist securing first honorable mention will receive a life membership in the Association, of the value of fifty dollars. Subject for 1902-1903, "The Differential Diagnosis of Typhoid Fever in its Earliest Stages." Conditions of the competition: (1) Competition is open to all persons eligible to active or associate membership in the Association of Military Surgeons of the United States. (2) The prize will be awarded upon the recommendation of a Board of Award, selected by the Executive Committee. The Board will determine upon the essay to which the prize shall be awarded, and will also recommend such of the other papers submitted as it may see fit for honorable mention, the author of the first of which shall receive a life membership in the Association. (3) In fixing the precedence of the essays submitted the Board will take into consideration primarily—originality, comprehensiveness and the practicability and utility of the opinions advanced, and secondarily—literary character. (4) Essays will consist of not less than ten thousand nor more than twenty thousand words, exclusive of tables. (5) Each competitor will send three typewritten copies of his essay in a sealed envelope to the Secretary of the Association, so as to reach that officer at least one month before the next ensuing annual meeting. (6) The essay shall contain nothing to indicate the identity of the author. Each one, however, will be authenticated by a non de plume, a copy of which shall, at the same time as the essay, be transmitted to the Secretary in a sealed envelope together with the author's name, rank and address. (7) The envelope containing the name of the successful competitor will be publicly opened at the next succeeding annual meeting of

the Association and the prize thereupon awarded. (8) The successful essay becomes the property of the Association of Military Surgeons of the United States, and will appear in its publications. Board of Award—Brigadier General Austin Flint, New York; Colonel Calvin De Witt, U.S. Army; Lieutenant Colonel Victor C. Vaughan, U.S. Vols. Robert Allen Blood, President; James Evelyn Pilcher, Secretary, Carlisle, Pennsylvania.

Toronto School of Physical Culture.—Among the successes of the past season we may count the Toronto School of Physical Culture and Expression opened in September last. There are already a sufficient number of pupils to impart to the classes that essence of competition which is as helpful in the gymnasium as in all other phases of education. In addition to the regular gymnasium classes this school has been entrusted with the department of physical culture at "Glen Mawr" (Miss Veal's School), the Loretto Convent, also with fencing and elocution at S. Monica's and the Presbyterian Ladies' College respectively. From a medical standpoint we are pleased to note that the directors recognize the importance of graduating the exercises to the individual pupil rather than expecting each pupil to conform to set exercises. The only possible objection to physical culture has, no doubt, arisen from ignoring this principle in the past. While the full course is beneficial to the majority yet there are those who can only safely take the lighter forms of exercise. The value of physical culture is greatly enhanced by healthful conditions, and in this respect the Toronto School has great advantages; situated in a healthful residential part of the city, the rooms are spacious and light, having a floor space of over 2,000 square feet and air capacity of 26,000 cubic feet, also well appointed dressing-rooms and shower bath. The fencing classes are proving a very attractive feature and give promise of enlisting a large number of pupils in New Year. Satisfactory progress is also being made in the elocution department, the correct use of voice receiving careful attention. Those of our readers who have not seen the gymnasium and its work are cordially invited to visit the rooms, Simpson Hall, 736 Yonge Street, any time after January 8th, when regular work will be resumed. We understand that the Saturday morning classes, at 10 o'clock, will be attractive to visitors.

Woman Surgeon on Ambulance Duty.—A woman has broken down the barrier and undertaken to do a man's work in another of the occupations for which it has been believed the nerve and brawn of a man were needed. A woman ambulance surgeon, the first of her sex, is to take her place where none of the skirted sex has ever been, and go on break-neck drives to scenes of death and disaster. On New Year's morning, in New York City, at 8

o'clock, Miss Emily Dunning, M.D., began a two-years' term as interne and ambulance surgeon at Gouverneur Hospital. After an appointment had been denied her once by the Board of Charities, in spite of gaining the highest place on the competitive list, Miss Dunning's daring triumphed. Again she passed the required examination, and recently she secured the coveted appointment. She at once took her place with the other internes in the accident wards and the operating room. She is required to do the full duties of her fellow-workers of the stronger sex, and attend all kinds of cases, running the gamut from persons in the throes of death by poison to the mangled victims of a boiler explosion. It will be six months before Miss Dunning will be sent out on the ambulance, and it is this feature of the hospital work which will be her greatest difficulty. "I know I'll have to go out on all kinds of calls," said Dr. Dunning, "but I've made up my mind that I can do it, and I'm going to." The first woman ambulance surgeon is attractive of face and frail of figure. She would not discuss the unusual occupation she had undertaken, nor say why she persisted in seeking the appointment. "I realize that I will be forced to experience many things that most women would struggle to avoid, but the valuable experience will repay me for all unpleasantness," she said. "Of course, I'll have to wear one of those lettered surgeon's caps. A creation in millinery would hardly look well after tearing along for a score of blocks on an ambulance." The district covered by the Gouverneur ambulance service, comprising as it does the greater portion of the crowded Ghetto and water-front section of the lower east side, is probably the most difficult in the city for a woman to work in. Surely, for a time at least, it will be a rare sight to see Ambulance Surgeon Dunning tear up to the scene of an accident, tampon a gaping wound in some victim, sling one end of the litter into the ambulance and leap to her seat in the rear as the vehicle dashes away. Then, too, Miss Dunning will have to learn to ignore her skirts and be able to swing herself into her seat just as an artilleryman vaults into his seat on the caisson and pivots about into place. Miss Dunning does not believe she will have any trouble or lack the necessary nerve to hang to her place on the rear seat while the ambulance, going at galloping speed, rocks and sways, slides from curb to curb and hurls around corners.

The Late Dr. Nunan's Residence, Guelph, for Sale.—We call attention to the advertisement on page xlii. of this issue of the estate of the late Dr. Nunan, Guelph, Ont. The doctor's residence is for sale at a great sacrifice, and, as the goodwill of the practice will go to the purchaser, should prove a splendid investment for any medical man desiring to secure an established practice in a growing town. Communications should be addressed at once to Jas. E. Day, Guelph, Ont.

The Physician's Library.

BOOK REVIEWS.

Year Book of American Health Resorts. By EZRA H. STAFFORD, M.B.

The author of this useful and descriptive book, Dr. E. Hurlburt Stafford, is well known as a literary man throughout Canada, and although he has met with success, yet owing to a not very robust constitution, coupled with a love of travel, he is also somewhat of a globe-trotter, consequently he knows his climatology not only theoretically but experimentally. The medical utility of climate in the preservation of health and cure of disease is well known, and in some cases offers the only means of prolonging life. A suitable change of climate produces a sense of exhilaration, with sharpened faculties and renewed vigor. The resisting power by which one is able to throw off disease is repaired, and the recuperation of the exhausted faculties manifests itself in increased power of application and endurance. As a form of treatment, preventive or curative, it is not necessarily more expensive than routine medication at home; and often gives more permanent results, besides being more agreeable for the patient. The North American continent and its islands present every known diversity of climate to be found on the globe; and during recent years the number of health resorts has multiplied to an unprecedented extent. On the part of the public, also, who have long been familiar with the nature and possibilities of foreign resorts, there has been a corresponding demand for accurate data and practical information regarding the resorts at home. The present literature of the subject, though not scanty in substance, is somewhat limited in range, and consists chiefly of books and pamphlets, emanating from interested sources for the exploitation of particular resorts or tours, and too scattered and ephemeral for immediate reference or authentic information. Dr. E. H. Stafford's comprehensive work, now in press, on the "Medical Climatology and Health Resorts of North America," will hence prove opportune, and will be received with interest. While devoting the necessary space to the purely scientific aspect, the book also contains in convenient form all the practical information and lesser details required by the health seeker. It embraces (1st) the general principles of medi-

cal climatology, and the relations of climate to health and disease. (2nd) A classification of the phases of climate to be found in the various regions of North America, with the therapeutic significance of each, and (3rd) a description of the chief health resorts and spas of the United States, Canada, Mexico, Central America and the West Indies, arranged in groups, according to class and medical utility. The treatment of the subject is lucid throughout, and will greatly simplify the question for the general reader, besides rendering the volume of assistance to the physician, who is daily consulted for medical advice in questions of the sort. The work is not a compilation in the remotest sense, but is based upon the independent study and personal research of the writer, the materials having been gathered during the past ten years, after much painstaking enquiry and investigation. By compact arrangement, and the exclusion of all that is not essential, the matter has been compressed within the convenient limits of a handbook. The addition of illustrations, maps, charts and tables contribute to the attractiveness of the volume, which is an octavo of about six hundred pages, and gotten up in the best taste. The price of this book is to be \$2.00, but advance Canadian subscribers will be furnished with it for the small sum of one dollar. W. A. Y.

History of Medicine. A brief outline of Medical History and Sects of Physicians from the Earliest Historic Period, with an extended Account of the New Schools of the Healing Art in the Nineteenth Century, and especially of the American Eclectic Practice of Medicine, never before published. By ALEXANDER WILDER, M.D. \$2.75. New Sharon, Maine: The New England Eclectic Publishing Co.

About one-third of the present volume is devoted to the "Sects" of physicians from the earliest historic period, including Galen, Avicenna, Boerhaave. The remainder is devoted to the modern "schools" of medical thought, including the enterprises of Hahnemann and similar luminaries; with the career of American Eclectic practice in full. The work is not so much a history of medicine as a brief for the sect mentioned; and the reader who does not regard American Eclecticism with emotion will not be particularly interested. Viewed from the historical standpoint, it has no place whatever, as there is no sense of proportion, no breadth of treatment, no historic insight. The spirit is entirely partisan, and the pages abound in sympathies and foreshortenings. There is much also of the martyrdoms of the earlier practitioners of American Eclectic Medicine. Though not possessed of formal academic education, these were men, it is shown, who had a special gift, and were inspired with extraordinary powers of intuition; qualifications, of course, which are far superior to mere learning, and ought to be recognized by licensing bodies. For some time, it

scents, these qualifications were not in fact so recognized; but the way that has since been made so easy in America for the osteopathist and other apostles of advanced medical philosophy was eventually made easy for the Eclectics; and now, freed at last from all the distressing trammels of legal restrictions, they read their herbalists and "live in history."

E. H. S.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other topics of interest to Students and Practitioners. By leading members of the medical profession throughout the world. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U.S.A., with the collaboration of John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Laudat, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh, and John Harold, M.D., London, with regular correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume III. Twelfth Series. 1902. Philadelphia: J. B. Lippincott Company. Canadian Agent: Chas. Roberts, 593a Cadieux Street, Montreal. 1902.

This is the third volume of this series, and contains many valuable articles. It is difficult and unfair in the main to single out and comment upon any one particular article, where they may all be said to be of such value, but this volume does contain one or two unusual articles to which particular attention might be called. Amongst these might be mentioned an article on the Treatment of Morphinism, one on the Urticarias, while "Remarks on some Effects of Fire Arms at Short Range—with Experimental Illustrations," will be found very interesting to the medical jurist. A very exhaustive article, entitled, "A Critical Study of the Theory of Inflammation," will be read by many with interest. The author handles the subject from a practical standpoint in a manner which cannot help but impress his readers.

The Treatment of Fractures. By W. L. ESTES, A.M., M.D., Director and Physician and Surgeon-in-Chief of St. Luke's Hospital, South Bethlehem, Pa. New York: The International Journal of Surgery Company, Medical Publishers, 100 William Street.

The author of this valuable little book, after some excellent hints as to first aid, and many good and useful directions calculated to make the reader think and see the reasons for certain

procedures, takes up and discusses the treatment of the fractures of the bones in the different regions in detail. The writer does not advocate the early use of massage, but follows closely the routine laid down by John Hilton, of Grey's Hospital, when he said, "functional rest is necessary to secure good union." Common sense and ingenuity on the part of the surgeon are advocated in all cases.

A most important chapter deals with Fractures of the Vertebrae, and goes fully into the question of advisability or nonadvisability of operation. The plates are not a strong feature of the book, as usual; X-ray views do not show up in a very satisfactory or instructive manner. The latter part of the book is devoted to the consideration of compound and "complicated" fractures, and in the discussion of fractures of the skull, the question of operation or no operation is fully dealt with. Altogether the book is one that every general practitioner, as well as every surgeon, should have in his library.

A. J. J.

Lessons and Laboratory Exercises in Bacteriology. An outline of technical methods introductory to the systematic study and identification of Bacteria, arranged for the use of students. By ALLEN J. SMITH, M.D., Professor of Pathology in the University of Texas, Galveston. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902.

With the present rush of work and time limited, we welcome with open arms anything in the direction of systematizing. This is the main object of these eighty-three exercises, with their various experiments and useful hints as to technique. We believe the author has made these exercises embody the more important points which clinical study demands, thus outlining a course of practical study. From his arrangement of working out the identification of unknown species, and inquiry as to the important cultural characteristics of known bacteria, we perceive that he has borne in mind the excellent features of Chester's Determinative Bacteriology, and we find many capital illustrations from the above work. Another feature of Dr. Allen J. Smith's publication which commends itself to laboratory workers is an arrangement of blank pages for notes of the outcome of experiments and of special technique, etc. As an attempt toward fixation of systematic procedure in class work, we consider this small book a decided success.

W. H. P.

Practical Obstetrics—A Text-Book for Practitioners and Students. By EDWARD REYNOLDS, M.D., and FRANKLIN S. NEWELL, M.D. Philadelphia and New York: Lea Bros. & Co.

What we don't know about the practice of obstetrics would well-nigh fill a book. It looks as if the authors had endeavored

to put all such in the excellent volume before us. The stereotyped description of the anatomy of the pelvic and genital organs, development of the ovum and of the embryo and fetus of course fills the first few chapters. In the "Diagnosis of Pregnancy" we are glad to notice a good many excuses are made for these of us who make mistakes. A plate of the breasts of pregnant women of varied complexions is, to our mind, rather poor.

One can't help but wonder when pelvimetry, so diagnostically described as essential in every case, will become the general rule among general practitioners—for his lot is becoming more and more complex—a school-bag will no longer suffice in which to carry his kit and "new baby" to the expectant mother—soon he must have a small "steamer trunk" built to fit under the seat of his "gig" to enable him to carry all the paraphernalia necessary to a modern, up-to-date delivery: in fact, he may yet require a specially prepared "delivery wagon."

The management of natural labor is very well put, indeed, though on a few matters of detail we think we might give the authors "pointers." In the forceps operations we could not but wonder if they continue to recommend the dorsal position, or whether they have adopted the new modern and convenient lateral position.

The pictures in the book we take to represent the authors, and we trust they are good likenesses. The publishers are to be congratulated on the book-making. s.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. Vol. IV., December, 1902. Diseases of the Digestive Tract and Allied Organs, Liver, Pancreas and Peritoneum, Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities, and Orthopedics, Genito-Urinary Diseases, Diseases of the Kidneys, Physiology, Hygiene, Practical Therapeutic Referendum. Philadelphia and New York: Lea Bros. & Co. 1902.

The contents of Volume IV. are: Diseases of the digestive tract and allied organs, the liver, pancreas and peritoneum, by Max Einhorn, M.D. Anesthetics, fractures, dislocations, amputations, surgery of the extremities and orthopedics, by Joseph C. Bloodgood, M.D. Genito-urinary diseases, by William T. Belfield, M.D. Diseases of the kidneys, by John Rose Bradford, M.D., F.R.C.P. Physiology, by Albert P. Brubaker, M.D. Hygiene, by Charles Harrington, M.D. Practical Therapeutic Referendum, by E. Q. Thornton, M.D. This December volume is full of valuable observations respecting discoveries and advances in the different de-

partments of medicine and surgery. Editorially we allude in this number to the fact that Dr. Max Einhorn seems to have coined a new word, but we expect that Dorland will have to incorporate the find in the next edition of his illustrated dictionary. J. J. C.

Biological Laboratory Methods. By P. H. MELL, Ph.D. Director of Alabama Experiment Station, Professor of Geology and Botany, Alabama Polytechnic Institute. New York: The Macmillan Company. London: Macmillan & Co., Limited. 1902.

We would suggest a careful perusal of this text-book by all biological workers who are starting off on their voyage of discovery in the laboratory, for it is calculated to develop their powers of observation and will tell them the what, where, and how, of microscopical work. The book deals, firstly, with the instruments and apparatus, with their accessories, that are usually found in every well-appointed laboratory, their construction, their mode of use, etc. The author then takes up the preparation of tissues from the beginning to the final stage. The sections devoted to the interesting department of photo-micrographs are especially full and clear. Many very useful and up-to-date formulae and tables are appended.

The work is not too voluminous or elaborate, but the discussions have been conducted just far enough to enable the student to build a good solid foundation and to be an incentive to further investigation.

The illustrations have been generously distributed and the work as a whole well gotten up by the renowned publishers, The Macmillan Company, Limited, George N. Morang and Company, Limited, Toronto, being their sole agents in Canada.

Obstetrical Nursing for Nurses and Students. By HENRY ENOS TULEY M.D., Louisville, Ky., Professor of Obstetrics, Kentucky University, Medical Department; Visiting Obstetrician to the John N. Norton Memorial Infirmary, Louisville City Hospital and the Home for Friendless Women, etc. Pages, 202. Price, cloth, \$1.00 net. Chicago: G. P. Engelhard & Company. 1902.

The general text books on midwifery are not suitable for nurses, and we are glad to see a book on this subject written especially for their use. After a short account of the anatomy of the pelvis and generative organs and rudiments of Embryology, the practical work of the nurse is taken up. The care of the pregnant woman, Labor Sepsis, the Puerperum, Infant Feeding, Signs and Duration of Pregnancy, Operative Obstetrics and advice to mothers constitute the body of the work. Although containing only 202 pages, there are 55 good clear illustrations. W. J. W.

Diseases of the Eye.—A handbook of ophthalmic practice for students and practitioners. By G. L. DESCHWENUTZ, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania. Fourth Edition. Philadelphia: W. B. Saunders & Company. Canadian Agents: J. A. Carveth & Co., Toronto. 1902.

This standard text-book appears in improved form, on better paper and with better type. It has been brought up to date by the addition of paragraphs on many new subjects, notably Metastatic Gonorrhoeal Conjunctivitis, Relapsing Traumatic Bullous Keratitis, Keratitis Annularis et Disciformis, Ophthalmoscopic Signs of General Arterio-sclerosis, Recurring Oculi Motor Paralysis, Educative Treatment of Strabismus, Aconi Dionin, Supra-renal Capsule. DeSchwenutz will be found by the practitioner to be a reliable and satisfying book of reference, handy and compact, with perhaps too little personality in it, but certainly a trustworthy guide as to accepted ophthalmic practice.

J. M.

Diseases of the Skin. A Manual for Students and Practitioners. By ALFRED SCHALEK, M.D. Instructor of Dermatology, Genito-Urinary and Venereal Diseases, Rush Medical College, Chicago, Ill. Illustrated with thirty-four engravings. Philadelphia and New York: Lea Brothers & Co.

This little volume sets forth clearly and accurately the cardinal facts of dermatology as they are understood by the best authorities of the present day. It is not an exhaustive text-book, but is a condensed summary of this subject compressed into a book containing a little over two hundred pages.

A. E.

Webster's International Dictionary, 1902.

It is pleasing to the eye, as well as satisfying to the mind, to open this massive yet compact volume, for its 4,000 illustrations dispense information even more rapidly than the most accurate definitions. As the publishers, G. & C. Merriam, state, "It is neither a library nor an encyclopedia but it is a dictionary designed to meet the everyday needs of all who write or speak the English tongue." The little word ALL in this instance holds the kernel of it. How many there are! How various their needs! Yet all may drink at this fountain and be refreshed.

J. J. C.

Where and How to Amputate. By LOWELL E. JEPSON, M.S., Minneapolis, Minn.

This pamphlet is worthy of perusal, being thoroughly practical and scientific, and written by one who evidently "knows what he is talking about," which is more than can be said of many others.

BUFFALO LITHIA WATER AS A SOLVENT.

BY J. SIMONIDES GRANT, M.D., NEW YORK.

ONLY such natural waters as possess therapeutic properties far above the ordinary break the bound of local environment and find their way into the outer world. And the extent to which such spread or popularity may go is a fair standard by which to gauge the therapeutic merits of a natural mineral water.

Measured by this standard, Buffalo lithia water is far ahead of all other medicinal waters in the estimation of the medical profession. Not only is it known and prescribed by many physicians throughout all the Americas, but it is also used in many foreign countries. Buffalo lithia water was first brought to my notice by Dr. J. S. Todd, Professor of Materia Medica and Therapeutics in the Atlanta Medical College, in consultation in a severe case of pneumonia. Professor Todd suggested milk and Buffalo lithia water, equal parts, alternated with equal parts of whiskey and Buffalo lithia water, every hour or two, *pro re nata*. I adopted his treatment with the most gratifying results and it has been to a great extent a regular routine with me ever since. Under this treatment I always find a decided lessening of the febrile movement, which I attribute to the pronounced solvent influence of the Buffalo lithia water on the kidneys. It undoubtedly stimulates these organs and increases their power of eliminating toxic elements from the blood.

In acute albuminuria of pregnancy experience has taught me to regard the solvent properties of Buffalo lithia water as a specific. It is my practice to guard my patients against this too frequent complication in pregnancy by a timely use of this water. I have them drink it freely from the beginning of the sixth or seventh month to its conclusion. This treatment, with proper regulation of diet and proper hygiene, insures a safe and easy delivery and leaves the patients in proper condition to meet all the requirements of motherhood.

If, however, the albuminuria be pronounced and persistent, as is frequently the case when I am called in the last few weeks of pregnancy, I push the Buffalo lithia water to the limit, allowing my patient as much of it as she can take without positive discomfort. Its solvent properties rapidly eliminate the urea and other morbid elements from the blood, and relieves vomiting and other symptoms of gastro-intestinal disturbances. There is also a rapid

diminution of the intensity of renal inflammation, a promotion of resolution and restoration of the secretory functions.

In severer cases, where there are pronounced symptoms of uremic poisoning, coma or eclampsia, the intra-venous administration of Buffalo lithia water, with sodium chloride added, will frequently save the life of the patient, even when all other remedies and measures have failed.

And this reminds us that Buffalo lithia water, on account of its absolute purity and smoothness, is a most desirable menstrum for the intra-venous administration of saline or normal salt solutions wherever and whenever indicated or necessary.

The therapeutic value of Buffalo lithia water in so-called skin diseases cannot be over-estimated. I say "so-called" because I regard this class of ailments as symptoms rather than diseases. They are usually indications of defective metabolism, or functional derangements of certain vital organs. This statement is supported by no less an authority than one of our most famous dermatologists, Prof. Geo. Henry Fox, who says that this class of ailments belongs to the domain of the general practitioner.

But it is in that class of skin lesions, such as the eczemas, acnes, erythemis, etc., due to an uric acid diathesis that I have found the solvent properties of Buffalo lithia water of the greatest value. That it neutralizes and eliminates this acid all physicians who have used it and carefully noted its results (by urinary tests, etc.) are agreed. And it is logical to suppose that this result is largely due to the fact that by its solvent power this water materially increases the metabolic forces, and prevents the contributory or prime cause in skin lesions. In other words, Buffalo lithia water not only removes the cause in this class of ailments, but it also eliminates (through the kidneys and other excretory organs) the debris or toxins which are invariably present.

The same theory applies to the therapeutic solvent effects of Buffalo lithia water in rheumatism, gout; the former supposed to be due to an excess of uric acid, the latter to too much lactic acid. The extraordinary value of this water in both these affections is attested by a large majority of cures, after other methods had failed. Buffalo lithia water also gives most excellent results in neurasthenia or nervous prostration, more especially when that condition is due to mental strain or over-work.

In diseases of the alimentary tract, such as gastritis, acute and chronic, intestinal indigestion, colitis, etc., Buffalo lithia water gives much satisfaction. It prevents the formation of noxious gases and inhibits the development of toxic organism.

I have also found it equally effective in diseases of the urinary bladder and its mucous-lined connections. The great solvent properties of Buffalo lithia water prevents the formation of renal or

urinary calculi, and also greatly facilitate their disintegration and expulsion if already formed.

Its solvent and eliminating properties seem to be due to the peculiar combination of the lithium and other alkaline carbonates which it contains, making Buffalo lithia water the most powerful solvent of uric acid of which we have any knowledge.

Not only is uric acid the nucleus of such formations, but it also enters largely into the various layers of their superstructure, a fact which accounts for the rapid solution, breaking up, disintegration and elimination of such formations under the administration of Buffalo lithia water. In like manner this water seems to dissolve and eliminate the lacto-phosphatic deposits peculiar to gout.

The tonic and solvent effects of Buffalo lithia water seem to be due to the fact that its composition is approximately that of the serum of the blood (Sloemaker), therefore it becomes at once identical with the blood, and is more easily assimilated.

In conclusion, I desire to impress upon those who have failed to obtain satisfactory results from the employment of Buffalo lithia water, and those who have not given it a trial in practice, one important fact, and that is, that the water must be taken regularly and systematically and for a reasonable length of time to insure its full effect and obtain the best results.

In chronic conditions of long standing the metamorphosis has, as a rule, been slow and extended over a considerable period, therefore it stands to reason that Buffalo lithia water must be taken for a corresponding period to secure its full therapeutic effects.

January "Cosmopolitan."—Several years ago a suggestion was made to President Eliot of Harvard that, inasmuch as the first thing a young man ordinarily did on graduating from college was to choose his life-work, it was important that each student should have presented to him a thorough discussion as to the advantages, disadvantages and temptations of each of the leading professions, so that in determining his life-work he might act with the fullest knowledge attainable. *The Cosmopolitan* has begun this discussion in its January issue by taking up the legal profession. Besides pointing out what the young man has to encounter in entering upon a lawyer's career, *The Cosmopolitan* considers at length the revolution which has taken place in the legal profession because of the reorganization of business in great aggregations like the U. S. Steel Corporation, and modern business instruments, such as trust companies, title and guarantee companies, and fidelity insurance companies.