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**SOCIAL AND PERSONAL MEASURES FOR THE CONTROL
AND LIMITATION OF INSANITY.**

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Insanity, or to speak more broadly, racial degeneration accompanied by mental disorder in the individual, is on the increase in America and Europe. This statement is not based upon a comparison of published Asylum records of the past and present time; for though these also show clearly an increase in Mental Disorders much exceeding in proportion the increase in the population, it must be remembered that the incident of asylum residence is purely a matter of practical convenience at the time of the attack, of which many, but not necessarily all, take advantage; and also that the legal definition of insanity upon which such commitments are based is in all cases a narrow, and in many cases an unscientific, one.

Because some cases of diphtheria are so severe, and the means for treatment at home so inadequate that the friends are forced to remove the patient to a hospital, it does not follow that a list of such cases will furnish anything like a true or complete idea of the diphtheria of the time.

Perhaps, though Heaven forbid! the over copious nomenclature of Psychiatry might with advantage be enriched by the invention of some new generic term to cover all forms of mental degeneration, whether intellectual or moral, independent of existing criteria. A term which would embrace not only the insane at present in duress, but the insane who are, and always will be, at

large, and also the criminal insane. It would take however, a very capacious and a very powerful term to bind securely together this vast and scattered class.

Insanity, though often gorgeously disguised, and called by innumerable high-sounding names, has left its vestiges down the long grey trail of History; and sometimes in the groves of wisdom, sometimes in the mobs of patriotism and sometimes in the robes of religion has left its unmistakable trace.

In the childhood of the races such phenomena of disease were something of a novelty; and while the species was barely articulate and scarcely coherent these victims of primitive disease enjoyed sometimes a pre-eminence almost divine. In modern epochs however, the increasing encroachments of the disease in all ranks and castes have made it a very familiar spectacle; and every city has its madhouse now, and every hamlet its local madman or mad family.

There must then be some great overhanging and unchanging cause, ever present in our midst, which makes possible this triumphal progress of the most distressing of all maladies, in spite of every effort to check its destroying career; and this, if carefully sought out, will give the physician as well as the lay individual a foothold of resistance, if the thought of resistance is still feasible, and I think it is.

One fact of dark significance it will be impossible in this connection to pass over, and that is that wherever that familiar combination of artificial conditions, known loosely under the term Civilization, becomes established, insanity is present also; and that the more complex and more highly developed the civilization, the more frequent and more hopeless are the forms of insanity. Insanity is therefore the shadow of a faulty civilization.

Much, perhaps more than one would at first imagine, may be done, however, to limit its spread, for any given number of insane patients may be divided into two classes.

The minority, in the first place, who owe their insanity to their own ignorance, rashness or misfortune. Had they not been ignorant, had they not been rash and imprudent, had they not been unfortunate, they would never have become insane. There is no other reason but their ignorance, rashness and misfortune for their insanity.

And, in the second place, the majority, who are destined to be insane, as the child of African parents is destined to have a dark skin. I say the majority, and I think I am perfectly correct. Here the insanity is not the outcome of the ignorance, rashness or misfortune of the individual himself—it is the crime of the parents. It is a crime for many people to marry. Our race is tainted and degenerated, and never until we look nature face to face and go back willingly, and like children, to her inexorable laws, will this taint disappear from among us, and our race regain the freshness and purity which it has long since lost.

I shall here speak only of the minority with whom insanity is, so to speak, optional. The measures for prevention will, with this class, be mostly personal. Society and legislation can do nothing. The individual must be informed, that he does not go insane through ignorance. He must be warned lest the same happens through rashness; and he must be guarded, as far as possible, from misfortune. Informed of the physiological laws upon which health altogether depends, and warned against overstrain of the nervous system and excesses of any kind.

The stupidity of the present educational system, both in Europe and America, is indirectly accountable for a great deal of insanity. This system is fanciful to the verge of silliness when the mental needs of the child are

considered. But it is perfectly convenient. It fits admirably into the condition of things known as domestic life. For these reasons it wins the applause of the general public. Besides being convenient I see nothing else to commend it. I say it is fanciful. It is as fanciful as the Queen Anne architecture of a summer cottage, where the little peaks and gables and gingerbread work is pieced, and cut, and shaved and painted like a toy doll's house, in utter disregard to the internal convenience or ultimate usefulness. It would be wise for the proprietor of such an edifice to camp out in the garden and spend the day in looking at his house as a work of art. Similarly the modern education is pretty to look at, with all its giddiness and contrasts of form and shape, but it is nearly absolutely useless for any other purpose but to look at. The first thing a college graduate has to learn when he comes to face the world is how to think; many never learn how. But it is convenient, for it calls for very little ingenuity upon the part of the instructor, and is of such a nature that it can easily be measured as to bulk. A curiosity cabinet of odd information, dear to the fool and the virtuoso.

The man who was not destined before he was born to go insane, will not go insane over his text-books, even if he does study too fast or attempt too much, if only he choose a proper time. The worst fault which one has to find with the education of the present is the time in life chosen for its inculcation. The majority receive their knowledge between ten and twenty. From ten to sixteen the boy or girl is at school. The mind during this time is subjected to one constant strain. It is always on the stretch. The inhuman practice of subjecting the student to periodical examinations make matters still worse. The superficial facility of one in receiving information in a short time is put in glaring contrast with the natural slowness of another. The cerebral apparatus is degraded to the level of the digestive system. Indeed few stomachs would stand the strain put upon the brain then. To the child's mind failure in such competitions, false in principle though they certainly are, means utter disgrace. Precocity, always a grave and unfavourable mental symptom, is encouraged, and the child grows to think that it has come to school for the purpose of "gulping" a given bulk of information as set down in a printed diagram. Take a child whose mind is not over strong, though perfectly healthy; or a child who, though strong in mind, is slow of development. Under happier auspices both would outgrow what, in the pedagogue's mind, is a defect, though in reality only an incident. In a school of the present, and I refer to Europe and America both, these defects are made permanent in the endeavor to forcibly overcome them. The school should be a house of wholesome recreation, where the child's character is carefully studied, and his mind allowed to develop in its own time and way, providing it be seasonable and healthy. Many a mind is set in a tangle before fifteen by a brutally unsympathetic schoolmaster, or an unwisely solicitous religious adviser, from which it never after recovers. From sixteen to twenty the boy and girl are at college—to prepare for the world! This is the period of puberty, one of the most critical periods in a human life. The physiological and the mental apparatus is in a state of transition and delicate expansion. The character is changing. Every weak point of the whole system is now in double danger. The whole physical and intellectual future of the individual may hinge upon the most trivial circumstances at this time. These things must be so, however carefully the child has been counselled and cared for in life up to this point. But fancy a child abnormally strained after six years of the hideous intellectual gym-

nastics, to which I have already referred, at school. Fancy him in a half-morbid state, with the intellectual nature artificially forced far beyond the physical, and add to these the dangers to which I have referred as peculiar to this time in life. Ought not this to be a time of rest, of ease, with relaxation and double caution? What is it? This is the time that *custom* (and let me accentuate the word *custom*, for I do not refer to any particular system of schools, German, French or English, but to a universal custom among all civilized people.) That custom has chosen for the child to prepare his mind for the active duties of life. Between sixteen and twenty-four the training is hard, and the means taken are stringent. The ground covered is wider every year. Hundreds break down and go insane at this time of life who would not go insane if the sagacity exercised by a horse-breeder or a dog fancier were exercised in their behalf. I have only touched upon this matter. Parents are probably ignorant of the great risk they are running at the time, but let us be mindful of these things. There is a great need of reform. Some day the main aim in education will be to teach men and women to *think* and to live. That day has not yet come. Some day one of the hardest tasks in life will not be dropped upon the yielding shoulders of unmatured youth, but will be undertaken when the individual is better able to endure it. These four years should be a time of rest, not of tremendous strain. But, as I said, education is fanciful, not practical. The time is convenient, it coincides with domestic matters. It is convenient, but not scientific.

Life under imperfect sanitary arrangements is almost sure to lead to some form of disease. Lung, heart and kidney disease, besides many other morbid conditions, have often been known under certain conditions to lead to mental aberration and insanity. The ignorance to which I have referred in the mental training of the child and youth is not greater than the popular ignorance is to the commonest rules of sanitary science. The mental faculty is strained until it breaks and warps. The physical nature is stunted and perverted and neglected, while all the attention of the teacher is being given to the crucifixion of the mental energies. I can only give a word in passing to the chief mistakes made. I refer to work, food, sleep and clothing.

No child should be forced to do heavy or violent work before the bones and muscles are developed. At the same time boys and girls should do enough manual, out-of-door labor to aid reasonably in the development of their muscles. With the child, recreation and labor should be almost interchangeable terms. A little care and tact would make them so.

Sleep is an important point. Some wise saw of the past is evidently accountable for the gospel of early rising. Men and women are not poultry, and the search for the early worm is a senseless proceeding. The development of the mind requires a great deal of sleep. Civilized beings ought not to arise in the morning before seven o'clock unless they have gone to bed before nine. An adult should have eight hours sleep, a youth ten, and a child twelve. Lack of sleep, while it is one of the first symptoms of insanity, is often one of the causes as well. Classes of the community, whose occupation prevents a full time of sleep, furnish a very large percentage to the insane.

Food and clothing need but a word. The first is to sustain the body, but many are so unwise in their choice of food, or their way of eating it, that digestive derangements are brought on, and which may lead indirectly to acute melancholia, other things being equal. Space is lacking here to go in detail into the abominations of Canadian cookery. With the most bountiful

supply of provisions the culinary art is wholly neglected, and scarcely understood at all. Clothing is only designed to protect the body from injury, and heat, and cold and wet. A digression upon the present barbarity of clothes, which shows all the instinct of primitive savagery, though very tempting, would lead too far a field from the subject.

I have touched upon the methods commonly in use for botching the individual's mental development; I have hinted at a few physical mistakes; it only remains to take up the third side of one's life. I mean the Emotional.

Psychology has revealed the fact that the religious temperament and the erotic temperament are very closely related. To bring religious emotion into full play at the critical period at, or just following, puberty, already referred to, has often been sufficient to unbalance the mind. The mind is weak and unstable, and the terrible force of these emotions passes over the delicate regions of thought like a deep and heavy storm. In young men and women hysteria is often mistaken by evangelists and religious advisers for what is called religious conviction, and under that mistake is encouraged by them to the great peril of the person.

Religion never made any man mad; but religious hysteria, which, by any but a mental specialist, might be mistaken for religious emotion, and encouraged and augmented as such, has often merged into a graver form of insanity. True emotion is never stupidly blatant. True emotion, whether religious or otherwise, does not dramatise and make postures. I wish evangelists and clergymen could only understand that at the critical period I refer to religious teaching should never be anything but didactic. The object at this time is to limit the play of emotions as far as possible. No measures should ever be taken with this class to urge one or both into a state of excitement or emotion of any kind. Such exhibitions are too often morbid and unhealthy. Self-consciousness is the misfortune of the young man or woman of twenty. Instead of increasing this everything should be done to cause these members of the community to forget self altogether. Too often, too, religious emotion, if carefully analysed, will be found to be merely erotomania masqued in the favorite verbiage of modern religiosity. Not pressing this point here, the fact remains that there are numerous cases of erotomania without even any such mask. The incidents of the conjugal life, and the facts of procreation are very simple physiological accidents.

The reticence of society upon these matters has, however, involved them in a cloud of mystery, upon which the adolescent mind broods unhealthily. The Greeks used perfect openness upon these subjects, as their literature and art have shown, and the simple ingenuousness of the Greeks was, I think, far more wholesome than our own contemptible and cowardly silence. But this would not be so hard were it not for the literature upon which the unformed mind of the youth of both sexes battens with hindrance or admonition; especially the novel and the newspaper of the day, which team with filth and beastliness untold. The reek and rottenness of the modern novel and newspaper are accountable for certain phases of insanity which have come under our own notice.

Above all things the emotions should not be stirred. They should be left absolutely still like a crystal and shining pool. It is dangerous to disturb them. Religion itself will rise in all its quiet beauty when the time comes. The passions need no encouragement.

To this point I have indicated only personal measures towards the prevention of insanity. The class I have referred to has been that which has no need to become insane. The insanity, if it do occur, is the result of ignorance. The ignorance of the parent in caring for the physical and mental

being of the child, or in unduly feeding the emotional nature. The rashness of the individual in yielding altogether to the ruling of the passions, and wasting his life and energies in a bacchanalia of the appetites which will surely drift the person into insanity. Of late years drugs, such as alcohol, morphine, cocaine and the like, have repeatedly caused insanity in persons otherwise mentally sound. Lastly comes misfortune as a cause. Sunstroke and accidents causing injury to the head, besides some contagious diseases which alter the consistence of the blood, may lead to mental aberration. Starvation and fright may be classed with these other misfortunes as unexpected. We can provide against them. We need not be rash. It is our own fault if we are ignorant.

In conclusion, one is forced, in all candour, to admit that in the past ecclesiasticism has, in numberless ways, abused the authority with which, from a very early time, it has found itself invested by virtue of the place which it has assumed in the uncertain field of tradition. This post of almost absolute authority is not due to the strength of ecclesiasticism so much as to the mental weakness of a species who, in the grey dawn of their understanding, had the same reverence for the fantastic, and the same respect for tyranny which one notices in the undeveloped child of to-day. The species must not be regarded then as the victim of ecclesiasticism; but, on the contrary, ecclesiasticism, with all its discrepancies, as the uncouth idol of the species, which it has voluntarily raised up to worship for want of anything else. Religion was originally the effect of a certain bent of mind in the species, and it would not be fair, therefore, to look upon religion as the cause of the mental infirmities of the species from which they do not seem able to shake themselves free.

I have already pointed out how, in the name of religion, the emotions of the sensitive child, and especially girls, are often utterly debauched, and the young woman as seriously injured and deteriorated by the detestable proceeding, as if she had been deflowered of her virginity. But I suppose the sacerdotal mind lacks the discrimination to perceive that there are certain exquisite forms of mental pollution quite as untoward, and with results far graver than the abrupt assumption of a perfectly natural physical function at the time approved by nature.

The earlier forms of religion encouraged practices most injurious to the health; and I might specially mention fasting and vigil keeping. The writer has under his charge at the present time an obstinate case of melancholia which, though there is a history of taint in the family, was certainly facilitated and hurried on by the weakening of the system which followed prolonged periods of fasting and nights spent in prayer.

I have been able in the above remarks to touch only here and there, and with a very light hand, upon the outer border merely, of a system of abuses which are, I am afraid, woven into the very fabric of our life as a race; and my thoughts have been confined to the class of cases where forethought and closer care would put off, for a time at least, and perhaps forever, what must be regarded as the greatest catastrophe which can overtake a human life.

THE TREATMENT OF INEBRIATE PRISONERS.

At the January monthly meeting of the Executive Committee of the Prisoners' Aid Association Dr. Rosebrugh, of Toronto, was commissioned to visit American Inebriate Hospitals and to interview specialists in alcoholic inebriety with a view to the introduction of special medical treatment of inebriates while undergoing imprisonment. The following is Dr. Rosebrugh's report:

I beg leave to report with regard to my recent visit to Canadian and American inebriate institutions as follows:

I left Toronto at 4.20 on the afternoon of Friday, February 4th, and arrived in Boston on Saturday at 10.30 a.m. After securing a room at the Parker House, I proceeded to the office of the Massachusetts Prison Association and thence to the office of the Prison Commissioners at the State Capitol. After obtaining the desired information and making necessary arrangements for visiting public institutions and for interviewing officials I began the work in hand. My first visit was to the Washington Home for Male Inebriates where I was fortunate in meeting Dr. Ellsworth, an acquaintance of my late brother, Dr. Rosebrugh, of Hamilton. Over 20,000 cases of alcoholic inebriety have been under treatment at the Washington Home. Dr. Ellsworth gladly gave me in detail his plan of treatment in this class of cases. I next visited the Massachusetts Home for Inebriate Women where there is a daily average of about eighty inmates. The attending physician (Dr. Temple) was not in the institution but I called upon him in the evening and obtained from him the desired information. From there I went to the "John Howard Industrial Home" where I found thirty-seven ex-prisoners employed in making brooms and whisks. Penologists are not agreed upon the wisdom of congregating ex-prisoners in these homes, but the John Howard Industrial Home is well spoken of and seems to be doing a good work. The Home is very nearly self-sustaining and the superintendent is himself an ex-prisoner. I may add just here that there is an annual State appropriation of \$11,000 in Massachusetts for the benefit of discharged prisoners, which I understand is a per capita grant of about \$20. My next visit after calling on Dr. Temple was to the Baker Gold Cure in Dorchester which I reached about 9 p.m. I made this visit at the suggestion of Dr. Temple who speaks well of the institution and the good work accomplished. There is a Sunday afternoon religious service which is attended by former patients which seems to keep up a desirable *esprit de corps*. I did not ask for and did not expect to receive information with regard to the remedies used, but I was given to understand that, if we so desired, the medicines could be supplied to our association at rates very much below the rates of the Keeley Company. As a matter of fact I question if the Keeley Company will sell their remedies outright. I left Dorchester at 10 p.m. and reached my hotel at about 11 p.m.

On Monday the 7th, in accordance with previous arrangement, I visited the State Reformatory for Women, near South Framingham. This is a model institution and the superintendent, Mrs. Johnson, is recognized throughout the continent as having extraordinary qualities of head and heart for such a responsible position. The average number of inmates is 350. From the Reformatory I went to Foxboro in the southern part of Massachusetts where the State Hospital for Inebriates is located. I here met Dr. Hutchinson, the resident physician, who readily gave me all the information I desired. There

is a yearly Government grant of \$20,000 and about \$12,000 more is paid by the State for the maintenance of patients. Pauper patients may be committed to this institution under the lunacy law and the municipalities from which they come are charged with their maintenance *volens volens*. The average number of patients is 148. I returned to Boston about 8 p.m.

On Tuesday morning also by previous arrangement, I met and had an interview at the State House with the superintendent of the Reformatory for Men at Concord. I also had an interview with Mr. Bailie, the State officer who has the distribution of the \$11,000 granted to ex-convicts and ex-prisoners. A definite amount is appropriated to each public institution, that is, firstly to the State prison, secondly to the Reformatory for Men, and, thirdly, to the Reformatory for Women, which amounts, as already stated, to about \$20 to each discharged inmate. This amount may or may not be given in cash. In some cases board and lodging is paid, in some cases tools are bought, etc.

From the State Capitol I was conducted by the Secretary of the Prison Association to the Police Court where I was introduced to, and had an interview with, the Chief Probation Officer, Mr. Keefe and his deputy, Mrs. Tuttle. The work of Mrs. Tuttle and her staff is similar in character to that carried on in a much smaller scale among women and girls by Mrs. Bellamy, while the work of Mr. Keefe and his staff is confined to men. This is the most important work I had the privilege of investigating during my absence. The Massachusetts probation system has had a very salutary effect in reducing the amount of intemperance, vice and crime in the State. First offenders, instead of being imprisoned, are placed "on probation" under the supervision of a probation officer. It is claimed that over 75 per cent. of those placed on probation are either reformed or are never again convicted of an offence.

I left Boston at 7 p.m and reached Hartford, Conn., at 10.45. On Wednesday morning I visited Walnut Lodge Hospital for Inebriates, where I spent several hours with Dr. Crothers, the proprietor, a well-known authority, and the editor of the *Journal of Inebriety* and also Secretary of the American Society for the Study of Inebriety. Dr. Crothers had no hesitation in explaining very fully his methods of treatment and the remedies used; he was also kind enough to give me a letter of introduction to Dr. D. L. Mason, of Brooklyn, another specialist in inebriety. While in Hartford I called at the residence of Gen. W. B. Franklin with a letter of introduction from an ardent friend of the Keeley Cure. The General was out of town. I, however, obtained the last annual report of the Board of Managers of the National Homes for Disabled Volunteer Soldiers, of which there are seven in the United States. Gen. Franklin is Chairman of this Board. For several years the Board of Managers have permitted the Keeley Company to give treatment to the inmates of these Soldiers' Homes and I wished to obtain the facts at headquarters, and to learn if this method of treatment had really been endorsed by the United States Government, as had been claimed. Mrs. Franklin informed me that the Keeley treatment had been abandoned in some of these Homes, and, on subsequent perusal of the annual report, I there learned that an order was issued last April which, I infer, was directed against the Keeley Company. The order is as follows:

"Resolved, That the treatment for alcoholism in the National Home for Disabled Volunteer Soldiers shall be under the control of the chief surgeons of the several branches, and that they shall use such remedies as they, in their professional opinion, may deem proper therefor, and that no officer or employee of the Home shall be permitted to have any connection, directly or indirectly, with or without compensation, with the proprietorship or administering of any special remedy therefor to be used in the Home."

There is a Keeley Institute in Connecticut, but Mrs. Franklin was far from being enthusiastic in its praise. I may add that from other and different sources I learned that the Keeley treatment is not making headway in the east and that it has disappointed the expectations raised regarding it a few years ago. It is not in use in any of the inebriate hospitals visited by me.*

I left Hartford at 7 p.m. and reached New York at ten o'clock. The next day (Thursday) I had an interview with Dr. Mason, after crossing over to Brooklyn twice. Dr. Mason is enthusiastic with regard to the success of the farm colony plan for the care and treatment of habitual drunkards. He has large experience in the treatment of these cases and he speaks very hopefully as to the results. I called twice to see the Secretary of the Board of Managers of the National Home for Soldiers but I failed to meet him. I failed also to see the Secretary of the New York Prison Association as he was at Albany watching some attempted legislation adverse to the intermediate sentence system.

On Friday I went to Fort Hamilton to visit the Inebriate Hospital there but the resident physician was away. On my return in the afternoon I visited the Wayside Home for Inebriate Women, 253 Bridge Street, Brooklyn. I did not meet the lady attending physician but I had a very satisfactory interview with the matron, Miss Knowles. The average number of inmates is fifty. I left New York by the night train and reached Hamilton Saturday evening where I spent Sunday, reaching Toronto Monday noon.

In addition to my visitation to American institutions I visited the Homewood Retreat, Guelph, where I had a very profitable interview with Dr. Lett, the superintendent. I also visited Lakehurst Home at Oakville and the Keeley Institute, Sherbourne Street, Toronto. I may add that I am corresponding with the medical proprietor of Bellwood Asylum, Quebec, and with Dr. Norman Kerr, the English authority on inebriety. I have the third edition of his text-book on inebriety which is the standard authority on alcoholism and opium inebriety.

With regard to the question of efficiency of treatment in inebriety, the results of my inquiries are as follows: Between 80 and 90 per cent. remain sober for periods varying from a few weeks to several months but that only 35 per cent. are permanently cured. Out of 10,000 cases treated at the Washington Home, Boston previous to 1885, 34 per cent. had remained total abstainers for over ten years. Dr. Mason, of Brooklyn, followed the history of 600 cases for ten years and 34 per cent. were still sober men. From correspondence with Hon. Mr. Eustis, ex-Mayor of Minneapolis, Minnesota, I learn that about two years ago some fifty-seven discharged prisoners from the county workhouse were given medical treatment for inebriety and that at the end of a year and a half only one half had relapsed, although many, if not most of them, had been convicted for drunkenness several times—one of them twenty-eight times. But I must stop.

It was my intention, as an outcome of this investigation, had time permitted, to present for consideration some practical recommendations, firstly, with regard to the establishment of a reformatory or hospital for inebriates in Ontario; secondly, with regard to the medical treatment of inebriate prisoners at the Central Prison; thirdly, with regard to the care and treatment of

*From the Annual Report of the Walnut Lodge Hospital, Hartford, Conn., I learn that in 1896 over 50 per cent. of the cases received had been patients at Keeley Institutes, and that 30 per cent. had been under treatment at so called "Gold Cures," not Keeley Institutes, thus making a total of 80 per cent. or over that had received some form of the Gold Cure treatment.

drunken women in connection with the women's department of your work; and, fourthly, with regard to the establishment of a city hospital for the treatment of the more hopeful class of cases.

I would suggest that these recommendations be deferred until next meeting.

CORRECT DIAGNOSIS AND ITS NECESSITY.

By DR. A. E. HARVEY, Wyoming, Ont.

Diagnosis may be said to be the science of recognizing disease, and of distinguishing one disease from another. When we have come to a conclusion on these points, that conclusion is also called our diagnosis.

In a paper the length of this we can only discuss the general principles. To form a correct diagnosis we should study the different pathological characteristics of each individual case, and carefully analyze every symptom, whether objective or subjective, taking neither the patient's nor friend's word for anything more than what it is worth to confirm our own finding, but relying on our own judgment; that, however, is strengthened if corroborated by the history of the case as gleaned from other sources. To enable us to thus come to an independent diagnosis, we must first have a correct knowledge of the several organs of the human system, anatomically and physiologically, when in health, as it is only by this knowledge, and by comparing the condition we find with our ideal of that organism in health that we can arrive at a correct scientific conclusion based on the real pathological condition of our patient. I would not have you think that I ignore any information gleaned from either patient, nurse or friends, but, as they are given, compare each of them with the condition in which we find the patient, and value their weight or throw them out altogether whichever they deserve.

What we have to deal with is the present condition of the patient, but in order to come to a positive conclusion after we have exhausted our objective symptoms, we should get the history of the patient, history of his present illness, his condition immediately before the present illness, with a few ideas of his family history.

As I am not talking to school boys, or first-year students—though I believe among us are more thorough and energetic students than the average in our universities—I shall not go into the minutiae of all the means which we may bring to bear on the case to form or confirm our conclusion, such as the position of the patient, sex, heredity, temperament, season, climate, town or country residence, age, existence or absence of epidemics. All of these should be considered, and if the case is obscure each of them weighed accurately. In addition to these means we have many ingenious and valuable instruments, a large number of which are practical and uncomplicated, a few of which I will briefly mention. As to the stethoscope and its modifications I must say, however, that when I am through pleasing the patient by using the stethophone, I always make my examination with the naked ear afterward.

The test tube and chemical reagents are not among the least of our means of diagnosis and deserve more space than can be given here, and in

diseases of the kidneys and their functions should hold a conspicuous position in every medical man's laboratory. The microscope in connection with the former I consider among the first instruments of constant every-day use, one which we will all admit has done more for pathology than any other, and if possible, to so compare them, more than all the rest together. The conspicuous position the advancement of the later part of the nineteenth century holds in pathological history is mainly due to the developments made by research with this instrument. It is an instrument which every physician should have in his possession, and not only have it but use it, use it till we become expert with it, and then and only then will we find the practical use of it. Among the rest of the instruments in daily use is our little insignificant clinical thermometer, now so universally recognized as essential to our diagnosis. In fact, there are many cases if we had forgotten to take our thermometer when we left the office we would consider we knew little about our patient's condition. And to the young physician it may be news to him that among those present are many who practised years before a thermometer was thought essential to form our diagnosis. Among other instruments of very practical use is the laryngoscope, so little used that the majority see nothing when they do use it. I have found it of great use in confirming my opinion, but must admit I am not an expert in its use, which is mainly due to want of practice. Other instruments might be mentioned not in every-day use with the town or country practitioner; as the sperometer, the dynamometer, the sphygmograph, the spectroscope and the X rays, all of which have their uses in their proper place. It would be much out of place to give you a lengthy dissertation on the use of these instruments, and the means by which we confirm our diagnosis, but for the benefit of the younger members of our association would say let it be complete, exhaustive, and, above all things, correct. Do not get rattled because some points may seem obscure, and if, after you have exhausted all the means at your command, you are yet in positive doubt, do not hesitate to call in consultation, for remember, when our diagnosis is correctly made our most important work is done. It is only by an accurate diagnosis we can anticipate the course the case will take, its probable duration and termination. It is imperfection of diagnosis which often makes us doubt the value of the remedies in use and gives rise to the assertion we so often hear, that surgery is a science; surgery is all right, but medicine is a humbug and a fraud.

I will now give a case or two of blunders I have made in my past practice, one or two that occur to my mind as landmarks on the mental horizon.

Case 1.—J. M. Agers, aged 17. I was called to see her in September, in the after part of the day; temperature 102, pulse below 100; no appetite; some nausea, and a little vomiting of bile. Had been to a picnic a few days before and was taken with headache after return. It was better in the morning, always worse about dark. I pronounced it bilious remitting fever and treated her accordingly. She became no better. The headache increased. The conjunctivas became injected. I noticed the flattened condition of the abdomen, and that the vomiting was of an easy "pour-out" kind; and it dawned on me all at once that I had the clearest kind of a case of subacute meningitis. I reversed the engine, stopped my quinine, darkened the windows, applied cold to the head, enjoined the most absolute quiet, but all the same effusion came on, delirium, coma and death was the termination.

Case 2.—In a child of 8 or 9, well marked pleura pneumonia; child belonged to healthy parents of good family history on each side. I treated it as an ordinary case for ten days, still no crisis. The child was neither

better nor worse. I asked for a consultation and called in Dr. Dunfield. The doctor looked her over carefully and pronounced it typhoid. The symptoms of typhoid were there and became more marked every day till she began to recover. That case worried me at the time, as I thought I should have observed the typhoid symptoms sooner, and maybe I should have anticipated it. For I can assure you I have seen more than one case just like it since that time.

Case 3.—Many of you are already familiar with the outlines of this case. Mrs. G., aged 28, called at my office to consult me regarding a tumor in the left side and iliac fossæ. On examination I found a large, irregular lobulated and very movable tumor; could be slid over to right side, could be moved up, could be lifted apparently clear of the posterior walls of the abdomen. She told me it began a few months before (not as much as six months before), was a little sore at that time, and had grown very much since; was not larger than your fist when she first noticed it; had never laid her up. But a long walk or heavy day's work tired her out. I could not make much out from her history of it. I told her plainly from its rapid growth it looked as if it was malignant. But from its being so very movable I thought it could be removed. I had tumor on the brain just then, having removed two or three just before this. A day was fixed for operation, assistance secured, a room prepared with nurse on hand and the patient anæsthisied. On cutting down through the peritoneum, lo and behold, what did we find but a misplaced liver. It had taken a complete summersault. The left lobe was in the pelvis; the right lobe lay across the abdomen reaching above, and to the right of the umbilicus; the blood vessels and ducts were anterior to the organ and twisted on themselves. We at once backed out and closed up the abdomen.

I might relate scores of other cases of mistaken diagnosis. I have met in my practice some of my own and some of other medical practitioners as good, and some of them better all-round men than myself.

Reports of Societies

TORONTO MEDICAL SOCIETY.

The regular meeting was held on February 24th, 1908—the President, Dr. MacMahon, in the chair. The minutes of the last meeting were read and adopted.

Dr. McKeown presented photographs of a boy aged 16, whose arms, which were rudimentary conical stumps, he had amputated. At birth these upper extremities were only tubercles, but since then they each had grown to be several inches in length. Dr. McKeown had removed two and a half inches of bone from both stumps. It was also pointed out that the patient's right femur was not a long bone, but felt like a ball of bone. The left femur, too, was much shorter than normal. The boy had acquired wonderful use of his toes; in fact, he could do anything with them most boys could do with their hands. The presenter of the case then reviewed the bibliography of conical stumps. Before learning the history of the case he thought the absence of the arms might have been the result of intra-uterine amputation. That being excluded, he considered that maternal impressions might be considered as a causative agent.

Dr. Gilbert Gordon said he thoroughly believed that maternal impressions had to do with the production of deformities. He cited two cases.

Dr. MacMahon described a fatal case which he had had under observation for the past two years. The patient came to him suffering severe pains in the region of the gall-bladder. Two days after he became jaundiced. He recovered. Later he had other attacks, some followed by jaundice, others not. He did not remember finding a tumor. After a long siege, the patient grew very weak, and it

was thought he was going to die. He became delirious. Then he began to eat freely; the jaundice cleared up and he crawled back to health. But, two weeks ago he again became deeply jaundiced, gradually sank and died. Diagnosis of obstruction of the common duct had been made. The cause of the relief after the first attacks resulted, the speaker thought, from the gallstones having ulcerated through into the bowel. During the latter part of the illness the patient had chills, fever, sweats and other symptoms of suppurative cholangitis.

Dr. Dwyer spoke of some of the *post-mortem* findings and presented the specimens. Section of the liver showed the presence of suppurative cholangitis, especially in the middle lobe. The bile ducts were dilated—especially the hepatic and the common duct. The gall-bladder was very much thickened and contained some bile. On opening the common duct into the duodenum, there was a large ulcerated spot surrounding the mouth of the duct, but the opening of the duct was not enlarged. The ulcerated patch looked as though it might have been the receptacle for a calculus. On squeezing the cut surface of the liver quantities of pus would exude from the biliary canals.

Dr. Dwyer presented a carcinoma of the stomach he had obtained at a *post-mortem*, although death had resulted from pneumonia. It consisted of a thickened small ulcerated patch with thickened edges at the pylorus. It had given rise to no symptoms.

Dr. Dwyer presented, besides, a portion of the trachea showing tuberculous ulceration; and a larynx from a patient dying from tuberculosis and syphilis, showing a similar condition.

Dr. Harold Parsons thought the first case was one in which a gall-stone

had lodged in the ampullæ at the mouth of the common bile duct. He had seen two specimens of such in Osler's collection. In one the stone was about the size of one's thumb-nail and still lay in the ampulla, and during life had produced a ball-valve action. In these cases the clinical picture is one of repeated intermittent fever, with increase of jaundice after each attack of pain and fever. This condition is very frequently associated with an infection of the biliary passages. It had been proven that by tying the common duct one could produce infection of the biliary passages. In the case reported by Dr. MacMahon, he thought that the suppurative cholangitis was a late complication; for all really straight-away cases lasted but a short time. One of the most interesting associations in suppurative cholangitis was endocarditis. Tumors of the pancreas or duodenum through pressure were often causes of cholangitis.

Dr. Gilbert Gordon said that one of the great difficulties in these cases was to find the obstruction. Such cases as the one reported seemed to him to show pretty clearly that absorption of the bile took place more directly from absorption through the lymphatic and hepatic ducts, rather than through the vessels.

Dr. W. J. Wilson referred to a case he had had under observation for a year and a half back, which was operated on; one stone was left in the common duct. Since then every week or two the patient has suffered chilly sensations and more or less pain. The day following the stools would be clay colored. Last fall the scar began to bulge out and the swelling looked as if it might rupture through. Under cocaine he made an incision through and inserted a tube. Thirteen stones came out at the time. After that two stones were passed. A biliary fistula still exists. For several days there may be no discharge, followed by a thick discharge of malodorous, dark-colored mucous and bile. The bile

is infected with the colon bacillus. The stone was, no doubt, there yet.

Dr. McKeown wondered why the stone did not ulcerate through into the bowel.

Dr. Parsons, by an illustration, showed the position of the stone.

Dr. Dwyer reported other cases of suppurative cholangitis he had seen. He thought the suppurative condition in the case reported was somewhat chronic in its course.

Dr. Geo. H. Carveth made some observations on examinations of the urine, contending that greater care and thoroughness should be observed in such work, inasmuch as it was an every-day procedure in the diagnoses of many cases, and an important one as well.

In speaking of one test for sugar, Dr. Carveth said: We add to the suspected urine sulphate of copper solution, then excess of liquor potassa and boil. We should boil for a long time to see if the cherry-red color appears. In searching for albumen we put a quantity of urine into a test-tube, boil and add nitric acid. We should let it stand for an hour or two. If albumen is found in all cases we should centrifuge and look for casts.

Dr. Carveth reported some cases where neglect of these precautions led to a wrong diagnosis.

Dr. Oakley reported a case of rheumatism with hyperpyrexia and albuminuria. The question arose during consultation on the case whether a wet pack might be used. He thought it might.

Dr. Gibb Wishart then made some extempore remarks on nasal obstruction connected with the septum. He first gave a brief account of the anatomy of the nose, showing pictures of the same. The illustrations showed the condition of affairs when there was deviation of, or a spur on, the septum.

Bosworth's was probably the best explanation, who says: In early childhood the child bumps its nose, and the result is a bulging between the cartilage and one of the adjoining bones, say

the ethmoid, or vomer. As time goes on there is an overgrowth and the formation of a spur.

Deviations might occur in the cartilaginous portions of the septum and also in the bony. Then on a straight septum there might be seen a nodule of bone, technically called a spur. Observers differed as to the time of their formation, some holding that the age of seven years was the limit, others that they formed between fourteen and twenty. It was generally agreed that they are traumatic in origin, but many could not be explained in that way. One authority believes they are due to the cartilage increasing in growth faster than the structures of the nose, hence a knuckling of it.

Deviations of the septum are accompanied by stenosis of the one nostril followed by catarrh. Mouth breathing is another result. Asthma often is a sequela, through reflex irritation. The doctor reported a case of asthma of some years' standing which had been cured by the removal of a spur. Treatment of these cases might be directed to reducing the amount of hypertrophied turbinated tissue in contact with the deflection by the use of chromic acid or the galvano-cautery. If this is insufficient the spur may be removed under cocaine. The speaker had used Bosworth's saw for this purpose, but now he uses a spokeshave. (The instrument was passed around for examination.)

If relief is not secured by this, then he advises breaking down of the septum, first making a crucial incision (instrument for doing this shown) and then introducing a splint to keep the septum straight.

Dr. H. Parsons in discussing the causation of asthma, thought it was due largely to a vaso-motor lesion.

Dr. Gordon thought the cause of asthma might be referred to a septic condition, although it was neurotic in many cases. The vaso-motor disturbance was secondary to the neurotic. Many cases of asthma were undoubtedly relieved by the removal of a nasal obstruction.

Dr. Wm. Graham, Dr. Oakley, Dr. W. J. Wilson and Dr. Starr discussed the subject and Dr. Wishart closed the discussion.

The society then adjourned.

TORONTO CLINICAL SOCIETY.

THE regular meeting of the Society was held on the 10th of March, in St. George's Hall.

Dr. Albert A. Macdonald, president, occupied the chair.

There were present the following Fellows: W. H. B. Aikins, G. S. Ryerson, Allan Baines, J. A. Temple, Edmund E. King, Albert A. Macdonald, Harold Parsons, Herbert Bruce, Elliot Brown, George A. Peters, Bertram Spencer, Alton Garratt, George Bingham, Geoffrey Boyd, Charles Trow.

The minutes of the last meeting were read and adopted.

Syndactylism.—Dr. W. H. B. Aikins presented a case showing the above condition in a man aged 32. The fingers involved were the ring and middle of each hand. The patient had a cousin with a similar deformity.

Dr. George A. Peters presented a patient who had recovered from a compound fracture of the skull with loss of brain substance, with the following history: H. McM., æt. 8 years, was admitted to Hospital September, 1897, with a history of having been injured through being knocked down by a running horse. He reached the hospital two hours after the accident. On examination a wound about half an inch long was found on the right side of the head. Its exact situation was half an inch from the middle line and half an inch in front of a line dropped vertically through the external auditory meatus.

Brain substance could be seen oozing from the wound, and pulsation could be detected; a deep depression in the vault of the cranium could be felt subtending the wound. He was conscious, but somewhat somnolent,

only rousing on being spoken to sharply or loudly. So far as could be learned he had never completely lost consciousness. There was complete paralysis of the left arm. The left leg and face retained power of movement.

The diagnosis of compound depressed fracture of motor area having been made, preparations were made to raise the depressed bone. Guarding the actual wound with a compress soaked in 1.20 ac. carbolic, the whole scalp was shaved and disinfected in the usual way.

Operation: A crescentic incision, convexity upwards, with a radius of one and a half inches, was made so as to include the wound, and the scalp over the whole of the depressed area was raised.

The depression was found to be oval in shape and about one and a half inches in its longest diameter. It was outlined at its margin almost all around by a fissured fracture of the outer table, and from this fissure numerous lines radiated to the centre, which was about half an inch below the general surface of the skull. There was a small amount of brain substance oozing from the centre of the depression. One of the small triangular pieces of bone was removed, and through the opening thus produced remaining fragments were sprung back to their normal level. The fragment first removed was then replaced. The whole wound was then closed by horsehair sutures, a small drain of iodoform gauze being placed in the original wound.

The temperature the next morning rose to 102½ and pulse to 124. By night the register was 101½ and 114. Next morning 99 and 94. The subsequent history showed rapid recovery. The wound healed throughout by first intention, but the paralysis of the arm was recovered from very slowly. In about one month however, all the motions were recovered except extension of the wrist and of thumb and fingers, and these motions are still

imperfect, though gaining slowly. The flexors of the hand are also weak. At present he is not able to extend the wrist while the fingers are flexed, and to extend the fingers while the wrist remains flexed; but not to perform both movements at once. The reason for this apparently is that the extensors are incapable of successfully overcoming the tonic contractions of the flexors, while the latter are put upon the stretch by extending both the wrist and fingers. The treatment has consisted in exercises, in voluntary movements, massage, electricity and the functions are still slowly improving. It is evident that the portion of the cortex that was destroyed is the area which normally presses over the movements of extension of the wrist and fingers. Horsley and others have shown that while there are certain well-defined areas which control certain movements, there are frequently outlying areas which seem to have a subsidiary influence, and may become functionally in the event of destruction of the main centres. In this case it is to be hoped that these subsidiary centres may prove adequate to the performance of the duties thrust upon them by the destruction of the main centres. This patient has youth in his favor, and it is certain that the powers of adaptability are greater in immature than in fully matured brains.

In the meantime it is important to maintain the nutrition of the nerves and muscles by electricity and massage.

It was Hippocrates who said that no injury of the head is too trivial to be despised, nor too serious to be despaired of. Injuries to the brain produced by heavy blows or falls upon a broad surface are apt to be productive of a certain amount of bruising and laceration at the seat of injury, together with a greater amount of injury of the cortex at a point diametrically opposite. The explanation is that the blow starts a wave of the semi-fluid brain tissue which breaks

violently against the bone opposite, thus producing a bruising and laceration of the cortex at that point with more or less bleeding. Between these two points there may be also traced a track of bruised brain tissue with minute punctiform hemorrhages, and molecular injury.

On the other hand, injuries to the brain produced by monetary impact of an injuring agent of small area is much less likely to start such a wave, and consequently the injuries produced by sudden, violent blows are usually limited to laceration of the brain substance immediately beneath the part of the skull struck. Thus non-penetrating or glancing bullet wounds are said to produce the most typical localized cortical lesions. The case just cited is evidently one of localized injury, though we do not know exactly what the nature of the fracturing force was—probably the cork of a horse's shoe.

In regard to prognosis, it must not be forgotten that in injury of this kind there occurs during the process of repair a soldering of the various membranes together. The *dura* also became densely adherent to the skull and thus there is an anchoring of the brain at that part which in later years may be productive of headache, epileptiform convulsions, or attacks of giddiness on sudden movement.

Dr. Peters presented a second patient upon whom he had performed a plastic operation to relieve cicatricial fixation of the thumb in flexion. The following was the history of the case :

The thumb in this case was bound down by a very dense and deep cicatrix resulting from a deep suppurating wound in the thenar eminence. The short flexor muscles seemed to have sloughed away, and the skin was firmly bound down to the metacarpal bone and the annular ligament. The thumb was drawn inwards, so that it lay across the middle of the palm, its tip pointing towards the little finger.

In the operation the cicatrix was

divided freely; also the outer part of the contracted annular ligament. The anterior and lateral ligaments of the meta-carpo-phalangeal joint were also divided, as well as the remains of the short muscles of the thumb. The long flexor tendon was left undivided but was dissected out of the cicatrix so that it moves freely.

The wound thus made on the palmar aspect of the thumb was filled in by dissecting up a flap from the dorsum. This flap was one and a half inches long by three-quarters of an inch wide, and its base was adjacent to the wound in the palm. Care was taken to maintain a good thickness to this flap so as to insure its vitality. Having been very freely dissected up, the flap was swung from the back to the front of the thumb and stitched into place by horseshair sutures.

The wound on the back was closed in the same way after very freely undermining its edges in all directions.

The wound was not dressed for six days and was found to have healed throughout by first intention.

Dr. George A. Bingham showed a boy under his care, who had suffered from compound fracture of the superior and inferior maxillæ and the base of the skull, with extensive injury of the soft parts.

In a brief description of the case, Dr. Bingham said: I present this case more as a curiosity than anything else. Sometime in December this boy was riding a bicycle at a rapid rate along the devil strip with his head down. He came in contact with a butcher cart which was being driven at a rapid rate from the opposite direction, the shaft struck him in the face crushing his nose and his eye out of sight, passing through the orbit, fracturing the superior maxilla, fracturing the inferior maxilla, fracturing the base of the skull, and carrying away a portion of the facial nerve. Dr. R. J. Wilson was called, and at his request I operated on the

patient the night of the injury. We first built up a nose, then brought the eye into position, adjusted the orbit and the fractured superior maxilla, and the hard palate, stitching the soft parts over the hard palate; put the jaw in a splint, and got him in a fair condition. He was vomiting blood freely. Those who saw him thought there was no hope for him, but the subsequent history shows that it is hard to kill a boy. Occasionally now a small portion of bone comes from the right ear. Owing to the damage done to the facial nerve on the right side, the function of the muscles on that side is gone, and gives the face the appearance it has. The vision of the injured eye now is very good.

Dr. Bingham presented a second patient with the following history: The patient, a little girl, on January 23rd, 1896, fell while playing, and scratched the skin over the right patella. On the same day she got her feet wet. The wound was not attended to. Five days after Dr. Powell was called in, he noted a flushed area below the patella on the upper end of the tibia, which was very tender. He considered the case one of osteomyelitis and sent her to the hospital under the care of the speaker. On the 29th he (Dr. Bingham) trephined into the epiphysis of the tibia and found a pus cavity which he scraped out. Healing took place readily. Three days after the patient began to complain of pain in the lower epiphysis of the right humerus. Incision was made and drainage, healing following. The next point attacked was the upper epiphysis of the same bone. Similar operation was done. The next bone attacked was the right tibia at its lower end. Since that time until now (about two years) the patient has returned periodically to the hospital for treatment, undergone operation on some bone and recovered. On one occasion a considerable portion of the right clavicle was removed; at another time the scapula on one side.

Few of the long bones had escaped. A considerable portion of ribs had been removed. The speaker thought that the disease would be sure to reappear. The patient had been put on tonic treatment, and she had the best hygienic care. The last bone affected was one of the ribs on the left side. The wound of this operation was not yet quite healed.

Dr. A. H. Garratt then reported a case, "Operation for Penetrating Pistol Wounds of the Abdomen with Perforation of the Stomach," the salient points of which were as follows:

On January 10th, 1898, at 6 p.m., he was called to York street to see a case of pistol shot wounds of the abdomen in a woman thirty years of age. Upon arrival he found that a quarter of an hour before the patient had been shot in two places with a 32 calibre revolver. The pistol had been discharged first from a distance of one foot, and the bullet had struck one inch to the right of the median line and three inches above Poupart's ligament. This bullet followed a subcutaneous course, and was afterward removed near the inferior iliac spine, five and a half inches from the point of entrance. The second bullet struck two inches to the right of the median line, and three inches above the umbilicus, and had been discharged from a distance of nine feet.

The patient complained of little pain, but was very much excited, having climbed an eight foot fence, wrested the pistol from her husband and would-be murderer, and shot a strange man in the thigh who tried to stop her on the street. He made a hurried examination, demonstrating with a probe that one bullet did not produce both wounds, and had the patient sent to St. Michael's Hospital under my care.

He visited his patient again at 8 p.m., and found her lying on her back with knees drawn up and suffering great pain all over the abdomen, although the house surgeon had given an

eighth of a grain of morphine before my arrival. The pulse was 110, and the temperature 100. The abdomen was markedly distended, and the face anxious. He decided on laparotomy at once, and ordered one quarter of a grain more of morphine, while the preparations were being made. It was more than an hour before the patient was prepared and my assistants ready. Dr. J. N. E. Brown administered ether, and during the first stage of anaesthesia the patient vomited a pint of blood clots and food. He made his incision four inches in length in the median line above the umbilicus and over the track made by the second bullet, through which the probe had passed.

On opening the peritoneum there was a sudden escape of gas leading Dr. Bingham, who assisted him, to suspect that his knife had wounded a knuckle of intestine. On careful search this was disproven.

The transverse colon was pushed down and the stomach brought up in the wound, and after a short search a perforation of its anterior wall was found, this healed with nine Lembert sutures of fine silk and continued the search for a wound of exit.

After going carefully over the stomach and neighboring organs and finding no other wound the peritoneum, in easy reach, was cleansed with sponges wrung out of hot sterilized water, and the abdominal wound closed with deep silk worm gut sutures, including all the tissues. A strip of iodoform gauze was passed down the bullet track and brought out between the sutures. Iodoform was dusted over line of wound, and iodoform gauze, sterilized gauze and cotton wool completed the dressing, which was held in place with a cotton binder.

The first bullet, near the iliac spine, was now removed through a small incision and its track lightly packed with a narrow strip of iodoform gauze. He then ordered a search to be made in the vomited matter for the second

bullet, but unfortunately it could not be found and he was still in doubt as to its whereabouts.

Patient recovered from anaesthetic nicely, but complained of a little pain all over abdomen.

The next day, January 11th, was given nothing but hot water in 5 doses, per mouth, had several attacks of vomiting.

On the following day, January 12th, was given an ounce of beef tea, per mouth, and the mouth was frequently washed out with ice water, feeding by nutrient enema was commenced, and there was no more vomiting. Patient still complained of tenderness over the abdomen.

The dressing was changed and shorter pieces of gauze inserted in bullet tracks.

From the 12th until the 16th patient was fed on nutrient enema and steadily improved.

On the 16th feeding by the mouth was commenced and continued without ill effect.

On the 31st the stitches were removed and the wound was perfectly healed. The bullet tracks were also healed. Patient was allowed to sit up on February 6th, and was placed on the regular hospital diet. This operation was not undertaken until symptoms indicating perforation of stomach, or intestine showed themselves, thereby disproving the assertion of Dr. Parke, of Scranton, Pa., in the *New York Medical Journal* of January 15th, that at such time the operation was always too late.

Dr. George Peters said he was not certain whether or not one should not in these cases, when the history showed pretty clearly that the bullet was fired at close range, explore the wounds at once without waiting for symptoms. If the bullet was fired in a fairly direct way it would be almost sure to go through the abdominal wall. The risk of an exploratory incision was not great.

Dr. King pointed out that it was lucky that the bullet had entered the

stomach instead of lower down, for the contents of that viscus had, no doubt, contributed to the stoppage of the course of the bullet.

Dr. Ryerson rose to say that he had visited many of the leading hospitals of Europe and the United States, and nowhere had he seen better surgery than in Toronto.

Dr. Temple made some remarks on a case of carcinoma uteri. The patient was a woman who had entered the pavilion at the General Hospital under his care. Her age was only twenty-eight, and she was the mother of four children. She was greatly emaciated. On examination he recognized a cancer of the body of the uterus, and the disease so far advanced that he could not offer the slightest hope by operation. The disease had involved the ureters, and had caused hydro-nephrosis.

Dr. Harold Parsons read the post mortem report made by Dr. H. B. Anderson, as follows:

Mrs. M., aged 28; general emaciation; subcutaneous fat scanty; fundus uteri three inches above the symphysis pubis. The thoracic and abdominal viscera were all examined, but presented nothing special of note except as follows: Right ureter was three-quarter of an inch in diameter, being immensely distended with fluid. Right kidney was very pale in color; weight six and a quarter ounces, and showed marked hydronephrosis. The opening of the ureter into the bladder was involved in the cancerous growth. Left ureter slightly enlarged. Left kidney pale, and showed a lesser degree of hydronephrosis; weight four ounces. The ulcerating cancerous mass involved the whole body of the uterus. The cervix was entirely destroyed. The growth involves the whole of the bladder, ulcerating through in the median line, producing a utero-vesical fistula. The orifice of both ureters was involved in the growth. Below it extends into the upper part of the vagina, and behind into the adjacent parts of the

rectum. Bladder was cut through from in front. Microscopic sections of the growth submitted showed the structure of a glandular cancer, adeno-carcinoma. The cancer evidently originated from the glandular epithelium, but whether those of the cervix or body of the uterus the microscopic examination would not determine.

Dr. Peters presented two astragali he had removed from a case of double club-foot upon which he had operated. He described the various incisions recommended for the operation.

Dr. G. S. Ryerson and Dr. B. Spencer were appointed a committee to act with committees from other societies in the consideration of the proposed academy of medicine.

The Society then adjourned.

THE LAMBTON MEDICAL ASSOCIATION.

The semi-annual meeting of the Lambton Medical Association was held in Watford, February, 9th, 1898. Vice-President of the Society, Dr. F. B. Wilkinson, presided.

ATTENDANCE.

There were present the retiring president, Drs. Jas. Newell, Gibson, Wickett, of Watford; Watson, of Arkona; P. McG. Brown, of Camlachie; Wilkinson and Bently, of Sarnia; Harvey and Brodie, of Wyoming; and J. N. Brown, of Toronto.

Dr. Wickett, of Watford, was elected a member of the Society.

Dr. Newell in his valedictory address reviewed the work done by the Association for the year just passed. The attendance had been good and the amount of work done a source of gratification. He duly appreciated the honor of having been president of the county society for the past year, and it had been a pleasure for him to do something toward making it a success.

Dr. Harvey, of Wyoming, then read a paper on "Diagnosis." (See page 94.)

Dr. Brodie expressed much pleasure at hearing Dr. Harvey's paper. He did not think medical men could bring in too many aids to assist them in diagnosis. Two months after starting practice he was called to see a patient who, he was informed, had taken a fit. He prescribed, but was not able to account for the convulsion, but on describing the case to Dr. Harvey, this gentleman gave him a clue by asking if he had examined the urine. In regard to using the laryngoscope and ophthalmoscope, Dr. Brodie regretted that greater facilities were not given for the acquisition of a better knowledge of their use at the colleges. He appreciated the value of the microscope, but the busy practitioner had not the time to make the most of its assistance in diagnosis. He thought the suggestion thrown out by Dr. Wilkinson at a former meeting a good one, that there should be some man in the county to do pathological work of all sorts; that he should be paid by the Government and should make analyses of milk, water, etc.

Dr. P. McG. Brown reported some difficulty he had in the diagnosis in a case of empyæma.

Dr. Watson, speaking of the care necessary in making a diagnosis, reported a case which had been treated before coming under his care as epilepsy for three years by the use of bromides. During the first year the fits came on every three or four months; in the second almost weekly; and the third every day. The patient was eighteen, with a neurotic family history. He (Dr. Watson) found one degree of fever. He examined the stools and found them very slimy. He decided that the case was one of mucous disease and that the convulsive seizures were reflex. He administered cathartics and disinfectants—pil. cath. co., resorcin and salol; and a little later iron, pepsin, bismuth and strychnia. No

bromides were given. The patient had one fit the day after the beginning of the treatment; another in a week; the next seven months after when there was some return of the slimy stools. Regarding the microscope, Dr. Watson said he had used it more formerly than of late, especially in urinary work. He felt that a centrifuge would be a useful instrument to have in order that microscopical examinations might be made while the urine was fresh.

Dr. Wickett, of Watford, reported a case of acute tuberculosis, the diagnosis of which at first perplexed him. The patient was a very timid young woman and would not consent to an examination of the chest at first. The symptoms later became more pronounced, and the patient died within six months.

Dr. Bentley referred to a case of an interesting character as to diagnosis. The patient was a child who had been ill three or four weeks. A previous attendant had ordered whiskey every three hours and given an unfavorable prognosis. His diagnosis was that the child was drunk. He stopped the spirits and ordered nothing. The next day the child was better. It had been drunk for three weeks.

Dr. Newell reverted to a case of mistaken diagnosis he had in his early practice. A boy while playing had his leg twisted. Dr. Newell, when called, had the pant-leg drawn up and detected a dislocation of the knee-joint, which he reduced readily. The boy suffering very much, another physician was called, who later asked Dr. Newell to see the case with him, saying there was a fracture of the thigh, which they found could be made out easily. The lesson, Dr. Newell thought, was a good one, namely, to strip the patient as much as necessary so as to make a thorough examination. Dr. Newell reverted to another case where a patient came to his office and asked for a liniment for a pain in the elbow. The doctor, however, decided to examine thoroughly and found a sub-

glenoid dislocation of the humerus, which he reduced under chloroform. He thought many injuries in the neighborhood of joints taken for dislocations were in reality fractures.

Dr. Gibson laid stress on the importance of a careful consideration of every case on the first visit. He had more than once regretted his jumping at conclusions. He reverted to a case he had called pneumonia which turned out to be phthisis.

Dr. F. Wilkinson advocated a plan he had been following with much profit—keeping a case book, and taking a systematic history of each case. This was a good thing to prevent “snap diagnosis.” He had met with several cases of irritable bladder due to rectal disease, where a complete examination gave a clue to the correct diagnosis.

Dr. J. N. Brown spoke of a class of cases in which the neurotic element was present to such a degree as to lead one to a diagnosis of hysteria or neurasthenia, when there was some pathological condition to account for the trouble to be discovered if the case were well gone into. He also referred to difficulties in connection with the diagnosis of diseases where erythematous eruptions were present.

Dr. Harvey, in closing the discussion, reported a case he had seen in consultation, which he at once decided, (and which afterward proved him right) was scarlet fever. Up till that time it had been treated for diphtheria, three bottles of antitoxin having been given.

Dr. Watson, Arkona, presented a child aged ten months. He attended the mother in confinement. The labor was natural, except that, owing to delay of seven or eight hours due to inertia of the uterus, the forceps were used. Within forty-eight hours the child was taken with convulsive seizures. The temperature was about 100. The pupil of the left eye was about twice the natural size. There was ptosis of the left lid, which would disappear with the seizure. A convulsion would last ten minutes. The

babe had thirty-six before he arrived. He advised cold applications to the head and bromide of potash, which had a good influence in checking the spasms. Within two weeks the eyes were normal except for a slight strabismus of the right eye which still persists. Some time after it was noted that the thumb of the right hand was flexed across the palm, which deformity still exists, and was the reason for the exhibition of the patient. There was also slight motor impairment of the arm and leg on the same side. A small depression could be felt near the centre of skull, slightly anterior to the coronal suture. He asked the opinion of members of the society as to the prognosis.

Dr. A. E. Harvey said he would expect that the child would get some better and have the use of the arm and leg. It would never have much strength in, or use of, the thumb. The lesion, no doubt, was centric, involving to some extent the arm and leg centres. It was, no doubt, caused by the forceps. Its lack of correspondence to the depression in the skull did not signify, for the bones of the head may have slid past each other and the injury done by a corner of bone. He had often seen similar cases caused by instrumental delivery.

Dr. Newell agreed with the foregoing opinion. There was a bare possibility that the case was one of anterior poliomyelitis. The symptoms were at times mighty insidious. The lower limb might possibly grow worse and get into a condition of talipes. He would be afraid of that. The thumb was, perhaps, as well as it would ever be. “I don’t use forceps as often as I used to,” continued he; “perhaps I am more patient or labors are easier. I do not often see trouble following their use.” Two years ago he had seen a case somewhat similar to this, the paralysis being especially marked in the upper extremity. He remembered too, seeing a case with Dr. Harvey where the forceps crushed in the whole parietal bone, a surface two inches square. All he did was to apply

some sweet oil as a placebo. The child got well without any convulsive or paralytic symptoms following."

Dr. Brodie thought that after a time the protuberance of the skull into the cranial cavity would be absorbed.

Dr. F. B. Wilkinson agreed with the previous speakers as to the cause of the condition. He recalled the strong condemnation of the over-frequent use of forceps made by Dr. Japp Sinclair at the last meeting of the British Medical Association. According to that eminent authority the forceps could be dispensed with in all but a very small fraction per cent. of cases. This address has led him to wonder if obstetricians here were not using the forceps too much.

Dr. Watson cited the case of a man aged 55, who consulted him for an offensive molar root, upon the extraction of which pus exuded from its cavity. In a week the patient reported himself to be troubled with a sensation in the left ear as of, using his own words, an insect boring in a log. Sleeping on the right side, it would disappear at intervals. It would stop suddenly and commence again without provocation. It would rouse him from sleep and interrupt him in conversation. The drum seemed normal. The only tangible symptom was an increased pulsation in the occipital artery. He asked for an expression of opinion on the case. He thought it might be accounted for by the presence of a calcareous or rheumatic deposit in the arterial wall along the line of the blood stream, possibly in the neighborhood of jugular foramen.

Dr. Harvey discussed the case and agreed with the diagnosis made.

Dr. Wickett reported the case of a man he had under observation for four months, who suffered from pain in the back and nausea. Anæmia was quite marked. The urine showed considerable phosphaturia. Under the microscope uric acid crystals were to be seen in abundance. Hyaline casts were present, but no albumen could be detected with heat and nitric

acid. With cold acetic acid there was some deposit, which disappeared on heating. The case had caused him considerable thought, and he was undecided as to the diagnosis.

Dr. Gibson reported a case of epilepsy in which he had successful results from an alternation of the bromides.

Dr. Newell referred to a case where the use of silver nitrate had been the treatment. He changed to potassium bromide and for two and a half years there was no return of the convulsions, when upon a cessation of the treatment the attacks return. A return to the bromide treatment relieved him. The use of acetanilid and other coal-tar production was commented on by the speaker; but he thought nothing took the place of bromide treatment.

Dr. Harvey spoke of the necessity of enquiring closely into an epileptic's habits. In children masturbation should be looked for. They should not be allowed to sleep on feather beds. No strong food should be allowed for supper. The bromide in his experience was the main drug in the treatment.

A cordial vote of thanks was accorded the representative of the DOMINION MEDICAL MONTHLY for his presence at the meeting.

ELECTION OF OFFICERS.—The following officers were elected for the incoming year: President, John Dunfield, Petrolia; Vice-President, F. B. Wilkinson, Sarnia; Secretary-Treasurer, P. McG. Brown, Camlachie; Executive Council, Drs. Gibson, Wilkinson and Brodie.

It was decided that the next meeting shall be held in Petrolia on the second Wednesday in May.

NIAGARA DISTRICT MEDICAL ASSOCIATION.

The quarterly meeting of the Niagara District Medical Association was held in Welland House, St. Catharines, on Wednesday, January 12th. President, Dr. Armour, occupied the chair.

Present: Drs. Armour, Clark, Merritt, Leitch, McCoy, Sheehan and McNulty, of St. Catharines; Dr. Vanderburgh, of Merritton; Dr. Nesbitt, of Toronto; Dr. Campbell, of Thorold.

Minutes of last meeting were read and adopted. Dr. McCoy was proposed by Dr. Sheehan as a member of the Association, and was received unanimously.

The Treasurer, Dr. Sheehan, read a report of the finances of the Association, showing that it was in a very flourishing condition indeed.

Drs. Merritt and Armour each described cases of well-marked appendicitis in which there was stercoraceous vomiting, extreme pain and tenderness under "McBurney's point," distinct induration in the region of the appendix, but pulse and temperature not above 100. In both cases the patients recovered without surgical interference.

Dr. Merritt also described a case in which a patient requested, while in full health, that his appendix be removed, he having had two or three attacks of appendicitis and fearing a recurrence. In this case there was found about half an ounce of pus. The appendix was partially disintegrated and so bound down by inflammatory adhesions as to be irreparable. The cavity was washed out and drained, and recovery was complete and uneventful.

Dr. McCoy described a very instructive case of multiple sarcoma in which the autopsy showed that only the stomach, pancreas and skin were involved.

Dr. Clark read a remarkably clever and complete paper on "Abortion." Discussed by Drs. Leitch, Armour, Vanderburgh, McCoy and Sheehan. All complimented Dr. Clark very highly on his very able work. This paper elicited a very lively discussion as to the use and abuse of the tampon for stopping the sometimes severe hæmorrhage of abortion. Drs. Armour and Leitch stated that of late years they had never plugged the vagina. Other members considered this in

most severe cases a very necessary part of the treatment. Dr. Armour stated that he had also almost given up the use of ergot. He relied on quiet for his patient and considers that Nature will do the rest.

A spirited discussion on the use of "Chloroform vs. Ether," as an anæsthetic was entered into by Drs. Clark, Merritt and Armour.

Dr. Nesbitt also described some very exhaustive experiments on dogs showing that ether is not nearly so dangerous an anæsthetic as chloroform. Dr. Nesbitt described very lucidly his experience in experimenting with the supra-renal capsule.

The next meeting will be held in Welland on the second Wednesday in April.

A CONVENTION which, as an advertising factor, will equal if not surpass any of the many which met at Toronto last year, is booked for Toronto for July 6th, 7th and 8th next. The International Association of Railway Surgeons, for such is the organization referred to, were induced at Chicago in 1897, largely by the efforts of Dr. B. L. Riordan, G.T.R. surgeon here, to make Toronto the place of their next annual meeting. As a result between five hundred and six hundred surgeons will spend three days here. Every road in North America, from Canada down to Guatemala, will be represented by its official surgeon or by proxy. The Association includes in its membership many of the ablest physicians, and for the past four years has met in Chicago, St. Louis, Denver and Galveston. Dr. Hutchinson, of Montreal, is first vice-president, the office held two years ago by Dr. Riordan. A deputation composed of Dr. Riordan, Dr. Pyne, M.L.A., and Dr. Thorburn, will wait upon the Board of Control, perhaps to-day, to ask for the co-operation of the city in receiving the visitors. The matter will be left in the hands of the Reception Committee.

Special Selections

THE KNEIPP CURE FROM A SCIENTIFIC POINT OF VIEW.*

By OTTO JUETTNER A.M., M.D.,
Cincinnati.

The name of Sebastian Kneipp, the priest-physician of Woerrishofen, is without a doubt familiar to most of my readers. Of recent years Kneipp has become a much-spoken-of personage, owing to the widespread attention which the people at large have given and are giving to the cause of which he is supposed to be the originator and representative. Physicians have subjected him to much adverse criticism, principally because he is the founder of a system of empirical practice which disregards in a great measure the groundwork and the aims and purposes of scientific medicine, and is, therefore, in a way inimical to the interests of the profession. While this is true to a great extent, there is, on the other hand, no doubt that a great deal of injustice has been done to Kneipp by this summary condemnation. It is certainly a fact that the majority of the profession have never attempted to familiarize themselves with Kneipp's teachings and methods. They have condemned the man and his work on general principles, without investigating into either and giving either the benefit of a just, *i. e.*, an intelligent, criticism. It is for this reason that the following lines have been written. To point out to the profession at large the hygienic laws and physiological principles which Kneipp, although unconsciously, applies, and through which he has performed his cures, is certainly in keeping with the truly *eclectic* tendency of modern medi-

cine, which prompts us to gather that which is good and valuable wherever it can be found, and to view all things with that broad spirit of liberality and justice which is characteristic of all scientific criticism.

If by a charlatan we mean a man who, with a view to financial gain, pretends to do what he can not do, Kneipp is certainly not a charlatan. Whatever he has done and written, he has done and written in good faith. A perusal of his book, "Meine Wasserkur," is sufficient to show that Kneipp is a man of the loftiest philanthropic ideals. He believes firmly everything that he teaches. He has the most implicit confidence in himself and his work, believing the practice of his hydropathic method to be a predestined part of his sacerdotal mission. It is a well-known fact that Kneipp appropriates hardly any part of his princely income for his own use. Everything goes to the support of his Church and his children, meaning by the latter the inmates of an immense orphan asylum which he founded and in the welfare of which he takes a truly fatherly interest. Numerous other charitable enterprises, such as a large hospital for incurables, another for cripples, etc., attest to Kneipp's spirit of charity and unselfishness. So much for the man. What about his method?

Kneipp's notions on the ætiology and nature of disease, as indicated in his writings, are a conglomerate of the old humoral pathology and certain original ideas of his own. Disease, according to Kneipp, is at all times a result of disorders of the blood, either in its circulation or in its composition. "The blood-vessel system," says Kneipp, "carrying the red life fluid, permeates the whole organism like a well-constructed system of water pipes. Every part, every organ of the body is supplied and nourished in a

*This article was prepared before Kneipp's
decease.

manner corresponding to its peculiar nature. Upon this process of nutrition depends the order of things within the body. Too much as well as too little blood locally or generally, or the addition of elements foreign to the nature of the body, will disturb the peace, the harmony, will cause discord, and substitute disease for health." Diseases, therefore, according to Kneipp, are either congestive (inflammatory) in character or blood disorders, produced by disturbance of the proportion of the normal constituents of the blood or by the admixture of "blood poisons." Kneipp does not pretend to demonstrate or even explain his pathological notions. He presents them as self-evident, and therefore true.

His methods of practice and modes of treatment, however arbitrary, empirical and unsystematic they may be, are to a large extent based upon the teachings of common-sense and some generally accepted principles of hygiene, supplemented by some original ideas, the product of his own experience. Abstracting from his *materia medica*, which consists of teas, decoctions, and infusions of many familiar herbs, some medicated oils, salves, and domestic remedies, Kneipp makes the cure of all curable diseases dependent upon two conditions, to wit:

I. A NATURAL MODE OF LIVING. —Kneipp seeks to bring the necessities and habits of men back to the simplicity and frugality of former, physically stronger generations. He derides the luxuries and refinements of modern civilization in matters pertaining to the sustenance and care of our bodies. He praises the unsophisticated manners and habits of the man from the country, Nature's own naïve child, whose body is strong and whose mind is unsullied by the *blasé* manner of the ultra-cultured from the large cities. Kneipp never tires of praising the glorious sunshine, the bracing air, the healthful exercise, the rich cow's milk, all of which are associated with life in the

country. He insists that a simple and natural way of living will make men stronger and better. He exhorts the present generation to harden their bodies, and thus render them strong, healthy, and capable of resisting the invasions of disease. He looks upon foot-gear as being a necessary evil that should be tolerated when one has to, but done away with whenever there is a chance. Walking bare-footed, according to Kneipp, is a splendid way of helping a man to become strong. He tells those who enjoy good health to fortify themselves against taking sick. They should bare their feet, let the air get at them, give tone to the muscles of the feet by brisk exercise, and stimulate excretion and circulation by walking for an half an hour or longer upon wet grass, in newly fallen snow, or even in a bath tub, the bottom of which is covered with cold water. He encourages cold douches applied to the extremities. The physiological effects of these methods I shall speak of later on. Kneipp sees in a return to Nature the solution of all social problems. Above all things, he encourages men to do away with all habits of eating and drinking that are not in strict accordance with the requirements of bodily health. He teaches temperance in the use of all stimulants—*i. e.*, coffee, tea, beer, wine, whiskey, tobacco, etc. Food should be simple and substantial. While not a vegetarian, Kneipp looks upon vegetable food as being more wholesome and more adapted to the physiological requirements of the human body than animal food. He considers bread the most important article of food. For its preparation the whole grain of wheat or rye should be used (Graham bread, *Schrotbrod*). These general hygienic and dietetic regulations Kneipp applies to the sick man with even more force and consistency than to the well man. His hygiene of the sick-room hinges upon two words—air and light. It would lead us too far to enter into the subject of hygiene

and diet as viewed by Kneipp. What I have stated is sufficient to point out the thrift of his thoughts. In a general way Kneipp's ideas concerning these subjects coincide with those of the profession of to-day. While he is in some respects a trifle severe and unyielding, there is nothing erratic or objectionable in his hygienic and dietetic teachings.

II. WATER AS A PANACEA IN THE TREATMENT OF ALL DISEASES.—We might as well add *cold* water, for Kneipp has not much use for warm or hot water as a therapeutic agent. He distinctly says: "For the removal of dirt and filth from the surface of the body warm water is good enough, but to expel the dirt and filth of ill-health and disease from the organism give me the pure, cold, crystalline blood of the meadows and mountains!" This statement, expressed in Kneipp's characteristic picturesque language, sets forth the claim which made Kneipp famous and with which in the minds of the profession and the laity he will always be associated. In spite of this he is but in a limited sense of the word a hydropath, because his water treatments are restricted to but a few forms of application. He rejects some hydro-therapeutic measures highly thought of by Priessnitz, Winternitz, etc., and has some methods distinctively and entirely his own. I will attempt to outline Kneipp's hydropathic method, and give an account of the physiological action of his several modes of water application.

Kneipp recognizes five distinct ways of applying water to the body surface, to wit: The moist pack, the bath, the steam bath, the ablution, and the douche. The principle which underlies the use of these different forms is practically one and the same. In a therapeutic sense water acts as a carrier of temperature. The douche is the only application of water in which the temperature is not the only factor concerned in producing certain effects, the quantity of the water, the

character of the stream, and the force with which water comes into contact with the skin being equally of importance. Since it is principally the *thermic* effects of the water of which the scientific hydropath avails himself in the treatment of disease, let me, for the sake of lucidity and completeness, interpose some considerations about the physiological action of *cold* and *warm* water.

The action of water of variable degrees of temperature primarily affects the nerves of the skin, and through them the blood-vessels and lymphatics. The greater the contrast between the temperature of the water and the normal body heat, the more marked will necessarily be the effect or the irritation produced. Thus, *extreme* cold or heat, if applied to the skin for a few moments, will increase the irritability of the sensory cutaneous nerves. Subjectively pain might be present, objectively the sense of touch is intensified; *i. e.*, the part which has been exposed to extreme cold or heat is *hyperæsthetic*. If the application of an extreme degree of cold or heat is prolonged, sensibility becomes lessened until a condition of complete functional exhaustion of the sensory nerves of the skin is produced; *i. e.*, the part becomes *anæsthetic*. What degree of temperature is required, and how long such temperature must act upon the skin to produce stimulation or depression depends entirely upon individual susceptibility. Another factor which determines the intensity of the reaction is the suddenness with which an extreme temperature acts upon the "thermic sense" of the cutaneous surface. If the latter becomes habituated to a certain high or low temperature by a gradual increase or decrease of temperature, the reaction, of course, will be slight. Since, however, as Winternitz remarks, the subjective state of the nervous system (humor, state of feeling, *Stimmung*, *Gemuethszustand*) is largely dependent upon the impulses

carried by the peripheral nerves to the brain and spinal cord, it is plain that the degree of stimulation or depression of the peripheral nerves can affect the central nervous system. We can stimulate or depress the whole organism through the peripheral nerves. It is possible, therefore, to counteract through the nerves of the skin conditions of depression or exhaustion affecting the nervous system generally.

In this connection it is proper to mention the effect which an indifferent water application (*i. e.*, water of a temperature near the normal body heat) will have upon the nerves of the skin. The physiological experiments of Heimann and Krebs have conclusively shown that water is absorbed through the skin; *e. g.*, during a long-continued bath. As a result of such absorption the peripheral nerve endings appear slightly oedematous. Molecular motion within these nerve filaments must necessarily be impeded or rendered less active by the presence of the aqueous elements, and, as a result, these nerve endings will respond imperfectly and less promptly to excitation. In this way the *sedative* effect of a full bath can be explained.

The most intense and lasting thermic effects, however, are produced upon the circulation. It is principally by a proper understanding of the action of temperature upon the blood-vessels that we can account for the efficacy and explain the therapeutic indications of Kneipp's cold-water applications. These effects upon the circulation are brought about by way of reflex action. The thermic impressions received by the sensory cutaneous nerve endings are reflected to nerve centres situated in the brain, the cord, and in the peripheral nerve ganglia. The stimulus is transmitted to the vaso-motor nerves and through the latter to the circular (middle) muscular coat of the arteries. In addition to this action the thermic stimulus will necessarily affect the

contractile tissue in the skin itself. Thus we have as a result of cold applied to the skin a contraction of the arteries in and beneath the skin; *i. e.*, an acute anæmia. The arterial blood is forced into the neighboring vessels, which, as a result, are dilated. The peripheral anæmia continues until the unstriated muscular fibres of the arterial walls become relaxed again, which happens when the primary thermic stimulus ceases to act, or when a stimulus of the opposite character is substituted. The blood rebounds with increased vigor and quantity into the vessels of the skin. This is what hydropaths call *reaction*. The skin again becomes hyperæmic, warm and red. It stands to reason that the reaction can be indefinitely delayed by causing the primary thermic stimulus to act upon the skin for an indefinite length of time. The decided effects of cold upon the circulation are well shown by an illustration from Winternitz, giving a sphygmographic tracing of the radial artery before and after ice applications to the brachial artery:



The acute anæmia of the skin, as has been indicated, is coincident with a collateral hyperæmia of the surrounding tissues caused by the influx of blood from the contracted cutaneous vessels. The larger the area is which is exposed to the action of cold, the greater will be the quantity of blood forced into the contiguous structures, and the more extensive will be the territory affected by this disturbance of the circulation. Thus it is seen that a thermic stimulus can be made to act upon parts that are in reality at a relative distance from the place where the stimulus is applied. It stands to reason that most intense and far-reaching effects upon the general circulation can be produced by acting upon the circulation of the

whole body surface. The therapeutic value of these circulatory changes is indicated by Winternitz, who expressed himself thus: "This process of alternately emptying and overfilling blood-vessels is capable of temporarily depleting congested organs, of in this way restoring their normal tone, of stimulating tissue change in these organs by accelerating and briskly altering the blood current, and by thus furnishing new material for the re-establishment and sustenance of the functional activity of these organs. A still more important effect of this changing current is the excretion and washing away of the morbid products which, as the results of decomposition and retrograde metamorphosis, have accumulated in the congested parts."

Let me briefly refer to some physiological and clinical experiments by which the effects of water applications upon the circulation have been strikingly demonstrated. Schüller trephined rabbits, and through the opening made exposed a circumscribed area of the meninges. Whenever a cold-water application was made to the abdomen of the animal dilatation of the vessels of the pia mater was distinctly noticeable. A warm-water application to the abdomen was followed by contraction of the meningeal vessels. Immersion of the animal in cold water was promptly followed by wide dilatation of the meningeal vessels, immersion in hot water caused forcible contraction. What a valuable therapeutic indication there is in these observations for the treatment of all conditions in which a depletion of the encephalic circulation is desirable; *e. g.*, apoplexy! Winternitz showed that during a cold sitz bath the circumference of the arm increased; in a hot sitz bath it decreased.

It would lead us too far away from our subject to enter any more deeply into the physiology of water applications. Enough has been said to show the deep and lasting effects which

may be produced upon the vital functions of the organism (circulation, respiration, excretion, nutrition) by the scientific use of water.

As I have mentioned before, Kneipp employs five distinct forms of water applications. Four of these—namely, the moist pack, the bath, the steam bath, and the ablu­tion—were in use long before Kneipp's time. It was Priessnitz particularly who systematized these various methods and determined their technique. The douche, as a therapeutic measure, is Kneipp's own idea. His suggestions as to the best way of hardening the body and rendering it insusceptible to disease (walking barefooted, walking in newly fallen snow, etc.) are based upon the old German adage:

"Recht kühlen Kopf und warmen Fuss
Gesunder Mensch stets haben muss."

Cold applied to the feet will bring about a powerful reaction, which will draw an immense amount of blood to the lower extremities. In this way congestions in the upper part of the body are counteracted and the feet remain warm. Among the therapeutic applications of water used by Kneipp the best and most effective is unquestionably

The moist pack, which, in justice to its originator, ought to be known as the Priessnitz pack. It consists of a cold wet cloth over which dry pieces of woollen material are placed. The size and the manner of packing will, of course, depend upon the part of the body to which it is applied. If the whole body is packed, from the feet up to the neck, a cold wet sheet, in which the patient is enveloped, answers best. The outward covering consists of a number of woollen blankets. The action of the moist pack is as follows: The cold moisture of the sheet causes contraction of the cutaneous vessels. The blood is forced into the vessels of the contiguous structures, causing an acute hyperæmia. Soon, however, the re-

action sets in, forcing the blood back into the cutaneous vessels, which, as a result, dilate. By this time the normal temperature of the body, aided by the heat-retaining dry woollen covering, has warmed up the moisture of the linen sheet. The pack keeps the skin hot, and in this way intensifies and continues the reaction. An enormous amount of blood is drawn to the surface, leaving the internal organs partially depleted. The therapeutic value of the moist pack will readily be seen. Every physician knows its value in cases of sore throat, tonsillitis, etc., in which the pack is applied to the neck. If applied to both lower extremities, a relative anæmia of the trunk and head is the result. If applied to the abdomen, partial depletion of the abdominal vessels, especially the sluggish portal system, will follow. If any limited part of the body surface is packed, the result will invariably be an anæmia of the part or parts whence the blood supply of the packed area comes. This form of treatment, by which blood is taken away from one part and drawn to a distant part, is what hydropaths call "derivating method" (*ableitendes Verfahren*). It accomplishes in congestions and inflammatory conditions what venesection aims at, without, however, weakening the organism by loss of blood. As a result of the anæmia produced, the nutrition of the depleted part or organ will necessarily be affected. Circulation is eventually stimulated, tissue change accelerated, absorption promoted. Thus we may look upon the Priessnitz pack as an alterative of great virtue. The duration of a pack depends upon the peculiarities of each case, and varies from one to three hours. Kneipp relieves all congestive conditions by means of this pack. It has, as will be readily seen, a wide range of applicability. It will well repay any physician to familiarize himself with its technique and action. It is applicable in all cases of inflam-

ination, where its powerful effect upon the circulation makes it a true anti-phlogistic. Congestive headache, insomnia, abdominal plethora, hæmoptysis, and a host of other conditions can be treated according to the "derivating" method with a great deal of benefit. Cases, of course, should be individualized. The physician should employ the method in keeping with its physiological effect. From this point of view Kneipp's way of using it is open to some criticism. The indiscriminate employment of so powerful a reagent is not without danger. For obvious reasons, organic disease of the heart and degenerative changes in the arterial walls (luectic, calcareous, etc.) are contraindications. The theory and practice of the cold, moist pack prove conclusively that for the successful employment of hydro-pathic methods a good physiological knowledge and an exact diagnosis are indispensably necessary. Nothing could be more preposterous than the claim made by some charlatans that for the practice of hydropathy no preliminary medical education is necessary. Another form of water application used by Kneipp is

The Bath.—Kneipp lays special stress upon the *cold* bath. Warm water, according to his idea, is good enough to start the treatment on a weak, irritable patient, and by gradually lowering the temperature make the patient tolerant to cold water. He also uses hot and warm water to give "medicated" baths. He adds hay, oats, or other vegetable products to boiling water, allows the water to stand until the right degree of warmth has been reached, and uses it for a variety of purposes. He attributes remarkable curative properties to these "medicated" baths, and gives explicit therapeutic directions for their use. There is no doubt that these baths impress the popular mind most favorably and can be relied upon to produce a profound moral effect. This is as much as can be said in their favor. In regard to his "medi-

cated" baths and a good many other subjects, Kneipp betrays his lack of scientific training. He is an empiric and can not logically distinguish between the *post hoc* and the *propter hoc*. So far as the simple warm bath is concerned, Kneipp frequently employs it as a means of intensifying the reaction following the cold-water bath. He causes dilatation of the cutaneous vessels by giving a warm bath, and then suddenly contracts the vessels by a cold bath. A favorite method of his is to give alternately three warm baths of ten minutes each, and three cold baths, each one lasting one minute. He begins with a warm bath, follows it up with a cold bath, and so on until six bath have been taken, the last one being a cold bath. This prolonged procedure is Kneipp's famous "tonic" bath. Its physiological effect is principally to stimulate circulation and, through repeated powerful reaction, to exercise and give tone to the muscular coat of the arteries by causing the vessels to alternately dilate and contract. Coincident with this effect is the impetus given to the reactive power (excretion, etc.) of the skin.

Kneipp's reasoning in regard to these subjects is based upon the assumption that reactive power is never absent and can at all times be restored. He takes it for granted that a patient's skin and circulatory system will necessarily respond. These premises not infrequently lead to erroneous conclusions, because they cannot be unconditionally granted in all cases. In some patients reaction* will not follow, or will be slow and imperfect. In cases in which the elasticity and activity of the skin and the tone of the arterial system are much impaired, instead of reaction internal congestions, and

even inflammatory conditions must be the invariable result. Hence we may say that discrimination in the use of cold, especially according to Kneipp's heroic method, is the *conditio sine qua non* of hydropathic treatment. I again repeat and emphasize, that without a thorough knowledge of physiology and pathology the practice of hydrotherapy is unjustifiable. Kneipp, strangely enough, discourages the employment of artificial means to bring about reaction. Massage, which should be and is the indispensable helpmate of hydrotherapeutics, find no place in Kneipp's armamentarium. Another form of water application use by Kneipp is

The Vapor.—In a therapeutic sense Kneipp does not attribute much value to steam. He dislikes the general steam bath (Turkish bath). He recommends the steaming of individual parts of the body to promote local excretion and render the part soft and tractable. Steam, as he says, only prepares the part for the water treatment proper. In a general way his notions do not differ from the views ordinarily entertained by the profession in regard to the uses of vapor. Another form of water application employed by Kneipp is

The Cold Ablution.—Its uses, effects, and contra-indications are practically the same as those of baths. The only difference is that in an abluion the water is brought into contact with the skin by means of a rough towel immersed in it. If the patient is bedfast or very weak, Kneipp substitutes the abluion for the bath. In febrile diseases (typhoid fever, etc.) the cold abluion is the antipyretic and stimulant *par excellence*. Kneipp was an advocate of the cold abluion in these cases long before Brand, of Stettin, published his classical statistics on the hydropathic treatment of typhoid fever. Last, but not least, we come to the consideration of Kneipp's typical water application—namely,

* Reaction is, as I have previously stated, the forcible return to normal conditions of blood-vessels, which takes place when the primary effect of a thermic stimulus passes off.

The Douche.—The water is thrown against, or falls upon the skin of a certain part. Kneipp's apparatus for douching is very primitive, consisting of an ordinary sprinkling can, which has a set of nozzles to furnish different kinds of streams. In a case which is capable of reacting, Kneipp's douche is of great value. The cutaneous anæmia, produced partly by the cold water and partly by the force with which the water falls upon the skin, is well marked. The force of the falling water acts by mechanically pressing upon the tissues of the skin *en masse*, and thus affecting them after the manner of massage. The force of the douche is, of course, in proportion to the distance from which the water falls, and is also dependent upon the size of the stream. The cold douche is an alternative of great power. Its effects are prompt and profound. The reaction following it is, as a rule, very intense. Kneipp combines the douche in various ways with the other forms of water applications, the object being to *intensify reaction*, which, after all, is the object of all hydrotherapeutic methods. This object, in so far as it is the physiological purpose of hydrotherapy, is strictly scientific, and therefore legitimate. It is only the way in which the accomplishment of this purpose is sought which is at times open to criticism. Like all empirics, Kneipp does not know at all times how to adapt the means to the end. His method of giving douches is somewhat indiscriminate, and hence not infrequently objectionable. It cannot be gainsaid, however, that in suitable cases Kneipp's douches are of great service. They restore muscular tone and elasticity to a remarkable extent and stimulate local circulation and tissue change. Let me add that massage, in spite of Kneipp's protest, is, in conjunction with the douche, an excellent auxiliary measure.

In conclusion, let me ask: What can be said of Kneipp and his methods

from a strictly scientific point of view? Has he established or taught anything new or original? Nothing would be more erroneous than to assume that Kneipp or Priessnitz or Schroth, or any other exponent of common-sense applied to the *art* of healing, has added one iota to the *science* of medicine. Their success simply proves that after all it is the simple fundamental laws of hygiene and physiology that contain the principles of the art of healing. The *vis medicatrix nature* is willing and, *ceteris paribus*, able to do her work whenever we give her a chance. Above all things place every patient in the surroundings which the living organism by reason of its construction and destination requires. No plant can live without *light* and *air*. How can we expect the highly organized body of man to develop and thrive without light and without air? It is well known that the lower animals in captivity degenerate physically. They need *exercise* to keep them strong and healthy. How can you expect man to retain his mental and physical buoyancy if you allow the perverted mode of living of to-day to make a machine out of him? Every member of the brute creation craves for the food adapted to the physiological requirements of its organism; it instinctively respects the science of dietetics. Why should man be allowed to disregard the voice of nature and *eat* and *drink* as his ultra-refined or vitiated appetite prompts him? Hygiene and dietetics, practically applied, are indeed, the preventers and healers of at least one-half of the diseases to which human flesh is heir. To act according to hygienic and dietetic laws is what I designated as "common-sense applied to the *art* of healing." It is the foundation upon which the magnificent superstructure of the science of medicine is erected.

The study of Nature's own plans and aims should be the prevailing spirit of all pathological investigations. We should learn to look upon disease as being a reparative

effort. We must try to appreciate fever as our greatest helpmate in the treatment of disease. We must not interfere with the process of rapid oxidation, but rather try to regulate and make it subservient to our purposes. Nature never wishes to destroy, but always to build up. It is only when the hostile intruder, causing the disturbance, is stronger than the resisting power of the organism, that local destruction or general dissolution takes place. Even then it is only the enforcement of one of nature's great laws: the survival of the fittest. This strictly biological view of disease is a most beautiful upholding of the science of bacteriology. We must try to understand the nature of over-nutrition (congestion, inflammation) and the means of equalizing the circulation in a strictly physiological way. We must, in this connection, learn to appreciate the value of the thermic effects of water (hydrotherapy) aided by mechanical means (massage). By so doing we consecrate the empirical pioneer work of such men as Schroth, Priessnitz, and Kneipp to the cause of scientific medicine, in the interests of human knowledge and for the welfare of our patients.

THE SCHOOL TRAINING OF YOUTH.*

By CHARLES E. WINSLOW, M.D.,
Los Angeles, Cal.

The two essential parts of a human being are mind and body, and so constituted are they that each is of the utmost importance to the other. They are bound together by ties that render them inseparable through life. A suffering body depresses the mind; a harassed mind wearies the body.

That which strengthens the human organism, stimulates the intellect to action. Raptures of the mind thrill the body. This being true, how important that from the first days of life, the intellectual and physical should grow and develop side by side.

That laws of health obeyed increase and add pleasure to life, should be known by every man, woman and child in our land. Health with a fair mind is worth more than a brilliant intellect in a feeble constitution.

The broadening light of knowledge reveals truths in cause and effect of hygienic principles before unknown. These bear added responsibilities, opening up a field of labor prepared for the growth of wise thought and action. We are realizing more and more the need of staunch and energetic men who can stand against the push and energy of the day, assert and maintain their beliefs and not break down in health as they are ready to grasp the great promises of the future.

A community's healthfulness greatly aids the progress of business. The commercial interests of the nation demand the improvement and protection of human life. To promote the future prosperity of our nation, and to elevate the physical standard of the human race, we must build up the bone and sinew of the country; therefore the science of hygiene must be understood. The grandest results will be attained only when the people come to a full comprehension of the value of the laws of health. To bring the greatest influence to bear upon the education of the masses, we must begin at the foundation and enlighten the people through the growing youth of the land. We must instil into their minds a knowledge of the fundamental truths of hygiene, and increase the powers of the intellect and body, thus making a better and stronger race of men and women.

The future history of our nation will be made by the children of the

* Presented to the Section on Physiology and Dietetics, at the Forty-eighth Annual Meeting of the American Medical Association, at Philadelphia, Pa., June 1-4, 1897.

present. What we do for the child of to-day is something done for the adult of to-morrow. Every healthy child indicates a healthy man or woman. Over twenty-five millions of youth in the United States—what a leverage for good! These minds filled with right ideas in regard to health, would be an unmeasured power whose expanding influence would be felt in ages to come.

Our schools are the corner stone of the nation; to them with their four hundred thousand teachers must we look for the forces that are to save the strength of the people. There should the pupils be taught the laws of health by word and deed. The members of the School Board should be men of intelligence, interested in the children's welfare and impressed with the fact that the lives and health of fourteen millions of school children are of vital importance to the nation. The selection of sites, building and furnishing of school houses and engaging of teachers should not be controlled by money consideration.

The rights of our school children should be recognized in all ways that will protect and develop the mental, moral and physical health. The play grounds should be large and free from dampness; the buildings should be examples of scientific sanitation; the rooms warm and comfortable, light and airy, free from draughts and poisonous gases, furnishing two hundred cubic feet of pure air to each pupil, and everything should be clean and sweet. The walls of the room should be slightly tinted blue or green that they may be restful to the eye, and there should be the best of blackboards. Care should be taken to have desks so made and placed that they will tend to straighten, instead of deforming the child. The microbe-breeding slate should be discarded and paper especially prepared used in its place. The pencils should be disinfected daily. The school books made of suitable paper, with the printing plain and legible, should

be owned and furnished by the district, thus preventing the carrying of books back and forth from families infected with disease, and also the sale of second-hand school books, coming as they often do, from houses where disease has run riot. The use should be forbidden of the open bucket, in which, through the medium of the drinking cup, the water becomes contaminated with spittle from the mouths of disease-infected children. There should be provided a place where the clothing can be warmed and dried. Children from homes saturated with germs of disease should not be allowed to endanger the lives of those from homes clean and pure.

A competent expert in the science of hygiene should carefully inspect the school and its surroundings, and thoroughly disinfect the building and its contents periodically. He should examine teachers, pupils and employees for contagious diseases, test the eyes of the pupils, see that all members of the school have been properly vaccinated, examine into suspected cases of sickness and infectious disease in families whose children attend the school. He should advise with regard to the amount of work pupils are physically able to undertake and also the kind of exercise needed by different children. He should report any needed changes in the buildings, and should lecture to the teachers and older scholars on the principles of hygiene.

The educators of our youth should be selected with the greatest care, for upon them rests a great responsibility; they are at the head of the institutions that indicate a nation's civilization; they are the developers of our citizens. Teachers are born, not made. They should have sound minds and bodies, should love their work and be in sympathetic touch with their pupils, studying their nature. They should have a facility to impart knowledge and at all times bear in mind that there is to be a

moral as well as mental and physical growth. They should wisely encourage and interest the child in the lessons to be learned, teaching him to observe and think for himself, remembering that education is in a great measure the development of the faculties rather than the imparting of knowledge. They should teach the importance of self-control, and should be able to infuse joy and gladness into the heart of the child. They should understand physiology and hygiene and learn that there are conditions of the nervous system that must be wisely handled, that there are functions of girlhood that cannot be ignored, remembering that the excitement of school life often hides from the teachers the pupil's weakness. The teacher should so instil the distinction between right and wrong into the mind of the youth that there will crystallize into the life all that is best of the moral, intellectual and physical world.

Education is development of power and a storing up of that which will give strength of character, penetration of mind and endurance of body. Childhood is the moulding time of life, where weakness of intellect and organism is to be overcome; when deformities of mind and body are to be corrected.

The science that aims to give better health, longer life and greater happiness to man should be paramount to all others; it is of vastly more importance to the youth to know what will prevent misery now, than to know that centuries ago Alexander sorrowed because there were no more worlds to conquer.

Make the study attractive to the student, stimulating the mind to further investigation. No child is too young to learn. Sow the seeds in the kindergarten. Let the truths be gathered all along the pathway of knowledge. Teach the children that cleanliness means health and strength. Teach them filth and dirt infect the air we breathe, the food we eat and the water we drink, and that it breeds

pestilence and transmits disease. Children should be taught not only the truths of the science of hygiene, but also the practical use of the knowledge obtained. The mind and the body should be trained to perform all their functions and live as nature intended.

No false ideas of modesty should prevent the teaching of the evil effects of youthful vices, and the danger of bringing wretched manhood and misery to those who sin through ignorance. These things would better be learned in school from wise teachers than in the street from evil-minded youths.

The older young woman should be taught the importance of motherhood and all it implies. The appalling darkness that surrounds this subject, and the ignorance shown by most young women at this period of their lives is an outrage against humanity.

At no time of life is the mental, moral and physical growth so rapid as in childhood. During that period most children are in school.

The first consideration of the teacher should be "how to keep the growing child well," aiming to improve the moral and physical, as well as the mental condition.

The high pressure system of education with its daily grind of study, followed by the severe strain of examinations, exhausts the mind, causes loss of appetite, interferes with sleep, making the child listless, and is responsible for a large share of the increasing nervous troubles. There are children who will bear crowding, but the majority with their soft pliant brains, will not stand the strain. The per cent. of myopic cases increase as the pupils advance from grade to grade. This is due largely to close application with poor light, bad printing and defective blackboards.

Forming bones, growing muscles developing nervous system and the constantly changing conditions of childhood need exercise.

Mind and body should be systema-

tically trained, together growing in strength and power. Forcing either at the expense of the other is dangerous. To cram the brain of a poor sickly body, without the vital force to use the knowledge, is to make an unbalanced human being. Cultivate good, active minds supported by the brawn and sinew of sound bodies, and they will wield an influence on this swiftly moving civilization.

Muscular tissue will not improve without muscular action. Exercise develops and tones up muscle and nerve force, thus increasing the heart's action, causing the lungs to expand and send richer blood to the brain, which brings clearness of thought and a more practical turn of mind. Manual labor and exercise should be wisely interspersed with study. Physical culture will give to our boys and girls more grace and finer physiques; the shuffling walk will be less often seen, the bent bodies will become more erect and awkwardness will disappear. Special exercises should be given to strengthen the weakest parts, fun and recreation forming part of the exercise. Motion is often rest to a child. Dr. Wey found that twelve of the dullest boys in school, after a course of physical training, without their knowing why it was done, increased their rank in their classes from 45 to 74 per cent.; their minds becoming more active, facial expression more intellectual and eyes brighter.

The children of civilized nations spend too much time in-doors. Long school hours should be avoided. Make the hours of study accord with the age of the pupil, who should rest each half hour. The French primary schools with their three grades, the first of three and one-half hours, the second of four and one-half hours, and the third of five and one-half hours for mental work and two hours for bodily exercise, have improved the mental and physical condition of their pupils. In the half-time schools of England, the children working half a day with three hours of study, pass

the fourth grade in nine and one-half years, while the full time children studying six hours a day do not show the same aptness, and are ten and one-half years accomplishing the same result.

The studies should be made interesting, cheerfulness being encouraged. Forced stillness in a school-room is painful. It shows too rigid a discipline, is wearing on the pupil and tends to suppression of the spirits that are needed to make a boy or girl an energetic man or woman.

All children have not equal ability to gain knowledge, and different organisms will not endure the same amount of work.

Rigid rules can not be enforced with safety; growing youth has peculiarities that can not be bound by human laws. The calls of nature must be attended to; because children make it a pretext to go out of doors, teachers are not relieved from the criminal responsibility for the destroyed health of a child. The strain that comes to the young girl rapidly developing into womanhood is enormous, and a wise judgment should be used in meeting the dangers to her moral, mental and physical life. The brightest pupils in school do not always achieve the grandest success in life. Machine work will not make capable men and women; the practical should be woven into the web and woof of children's lives, and their reasoning powers developed. Thoughtful meditation is worth more than impulsiveness.

Crowded education without due regard to the laws of health is responsible for the alarmingly increasing defects of childhood. The tendency to heredity, defective eyesight and hearing, pulmonary troubles and deformities, disordered digestion and shattered nervous systems threatens us as a nation.

Education should so improve the mental and physical condition of the child that he will rise superior to his inherited tendencies; then will each

successive generation grow stronger morally, mentally and physically.

In this age of excessive activity with its wonderful progress in trade, art and science, taxing brains to their uttermost, comes weariness and failure before life's work is fully completed. Education calls for the deepest search for treasures of science, which will bring to the surface grand results in a moral, intellectual and physical manhood, better prepared for life's work, thus enabling him to grasp great possibilities, and make them subservient to his will.

Civilization's light has lessened the shadows of ignorance and we begin to realize that influences are being generated now that will tend towards good or evil in the ages to come. Increased knowledge shows us the way to improve our schools, tells us what is needed to better protect and make sound in mind and body our youth, but back of this must be a power to make and enforce laws of health.

State and government must be the power, with agents systematically carrying on the work, and controlled and guided by a secretary of health at Washington.

Here on the edge of the century let us make ready for the future and send the rays of a brighter civilization into the next, by an army of perfected men and women whose exalted characters, brilliancy of intellect and physical power will make our nation the peer of all others.—*The Jour. of the Am. Med. Association.*

DOES PUBLICITY INCREASE CRIME?

When the medical student reaches cardiac diseases in the course of his studies he frequently discovers that he has a systolic murmur or some other alarming symptom of heart disease. This fact is so well known that it has passed into that most ancient of all storehouses from which the college professor draws his jokes. Is this harmless form of

"suggestion" a true index of the effect on the public of a constant presentation to their minds of the details of crime? Do the sensational reports of murders, of rape, incite other men and women to like deeds? Is crime infectious and contagious?

Warren, in discussing this subject in the January number of the *University Medical Magazine*, asserts that newspapers propagate crime in three ways: (1) by suggestion, (2) by creating an insane desire for newspaper notoriety, and (3) by placing a premium on crime. The newspaper stands in about the same relation to the public, according to this writer, as a hypnotist does to his subject; and while there is some doubt whether a hypnotist can by suggestion induce a person to commit crime unless he already has a leaning in that direction, still there are too many individuals who are willing to be persuaded into wrong-doing, especially if they hope to profit by it, to make that excuse of much avail.

As for the effect on the would-be criminal of seeing his name and photograph in the "Extra" of a penny print, there is much direct testimony that boys and others, who have committed some horrible crime such as train-wrecking, were impelled to it by the love of notoriety. Imagine yourself a criminal, considering the chances of being caught if you carry out a certain daring burglary. What would be the relative deterrent effect upon you of the methods of trial and publicity in this country, and, for instance, in Germany? The conditions here do not require description. On the other hand, in Germany, the prisoner drops out of existence, one may almost say, until the result of a secret trial has either released him or separated him still further from all contact with his fellows. It cannot be denied too, that in Germany the scarcity of mercy would have a still further deterrent effect upon intending criminals; but the difference in this respect in our own country is, in no small degree, the result of the

habit we have grown into of looking upon a criminal trial as a contest, and if the criminal makes a plucky fight, or if the odds are heavily against him, the love of bravery and fair play, makes both jury and public unwilling to decide against him, irrespective of the crime which has brought him into the lists. The remedy for this state of affairs proposed by Warren, is to ask the representatives in Congress and in the Legislatures to pass laws prohibiting the publication of this class of news.

In the *Public Health Journal* for December, Humphrey, of Oregon, takes up the increase of crime from a little different point of view. He too, admits the increase of crime (there were 48,834 murders and homicides in the United States in the ten years ending 1895), and laments the ineffectual means of prevention which are now employed. Impressed as he is with the fact that criminals to a great extent breed criminals, he advocates the asexualization of old offenders, as the most logical measure to protect the State from an ever-increasing number of individuals having a well-marked criminal tendency.

As to the practical outcome of such a law, he says:

"Criminals would regard such a law with terror, and would rather take their chances against anything than having their procreative organs removed. I am aware that a great many will not agree with me, but I have the courage of my convictions and can afford to be criticized. Of all the criminals that should be so dealt with for the first offence are those who rape innocent women and girls. All other classes might be subjected to the operation of such a law on a second conviction."

The study of anthropology has proved the existence of a criminal type, with marked characteristics in anatomy and physiology. How fruitless to allow these parasites upon society to multiply, and then to spend millions in the attempt to alter these characteristics in the individuals of

ever-recurring generations! And every year while the Government is performing this task of Sisyphus, thousands of good members of society are robbed and butchered by the degenerated who ought never to have been generated.—*New York Medical News*.

THE BACTERIOLOGIST OF THE ONTARIO BOARD OF HEALTH GIVES THE RESULT OF A SEARCHING TEST OF ANTITOXIN PURCHASED ON THE OPEN MARKET.—Under the date of February 1st, Mr. John Mackenzie, Official Bacteriologist of the Ontario Board of Health, reports the following result of his action in subjecting Antitoxin purchased on the open market to bacteriological test: "I beg to report to you upon the result of a test which has been made during the past month, upon Messrs. Parke, Davis & Co.'s Antitoxin. This firm has repeatedly requested that such a test should be made, but routine work in the Laboratory has been so great that it has been impossible to get the time until recently for its completion. The sample tested was bought in the open market, at a drug store, and the test applied was one to determine if the sample contained the number of antitoxic units indicated by the label. The label claimed that the bottle contained 1,000 units, the result of the test showed that it contained over 1,200 and under 1,500 units, probably nearer 1,500 than 1,200 units. This shows that the Antitoxin was reliable, as it is necessary to place in the bottle a good margin of units in excess of the label strength, so that the loss of units which takes place by keeping, may not be so great as to bring it in a reasonable time below the amount indicated by the label. Antitoxins differ from other drugs in this respect, that there is no danger in over-dosing; the danger is rather the other way, and the rate of decrease in strength due to keeping is determined by factors which are largely not controlled by the manufacturer."

THE

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EDITOR:
 BEATTIE NESBITT, B.A., M.D., F.C.S.

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THE TREATMENT OF INEBRIATE PRISONERS.

For six or eight months past, a persistent attempt has been made with a view to the introduction of the "Keeley Cure" into the Central Prison, Toronto, as well as in the county jails of the Province. A similar attempt has been made, we understand, in several States of the neighboring Union. Capital has been made of the fact that this form of cure was admitted, a few years ago, into several of the United States Military Homes for Disabled Soldiers, and this has been heralded by the Keeley Co. as an endorsement of the Keeley Cure by the United States Government. In Toronto the influence of the Prisoners' Aid Association was solicited to endorse this appeal to the Ontario Government. Largely as an outcome of this appeal on the part of the friends of the Keeley Co. the Prisoners' Aid Association commissioned Dr. Rosebrugh, of Toronto, to make a visitation tour of inebriate institutions in the United States, and to report to the Association. This was done,

and we have been fortunate in being able to secure a copy of this report for this issue of the DOMINION MEDICAL MONTHLY.

It will be seen from this report, firstly, that—from whatever cause—the privilege of giving medical treatment by the Keeley Co., in the National Military Homes of the United States, has been withdrawn. Secondly, that the Keeley treatment has not been endorsed by any of the physicians of any of the institutions visited by Dr. Rosebrugh.

It will also be seen in looking into the statistics of results of treatment of chronic alcoholic inebriety that although from eighty to ninety per cent. abstain from drink for several months, the percentage of those who abstain for ten years or more does not average more than about thirty-four per cent. The experiment made in Minneapolis is interesting, viz.: fifty-five of the prisoners discharged from the workhouse were given treatment for inebriety and at the end of

eighteen months only fifty per cent. of the cases had relapsed.

The question is an important one and we will be glad to reproduce Dr. Rosebrugh's recommendations in our next issue.

THE REPORT OF A MEDICAL MAN'S VISIT TO THE REALM OF ANÆSTHESIA AND UNCONSCIOUSNESS UNDER CHLOROFORM.

A young physician resident in this city, who is a careful and ardent student of bacteriology and kindred subjects, gives the following description of his condition while undergoing anæsthesia. He fears his account will be received with incredulity by his confreres. Here it is:

As I was going under chloroform I thought I would note the different phenomena as they developed. So I said to the doctors I would give them a sign. At first I seemed to recede from the periphery to the convolitional area of the brain central-wards, in a direction parallel to the fibres of the brain until I arrived at the optic thalamus, which I recognized. On my road from the periphery toward the centre of the brain, on looking backwards I could almost, half in imagination, see that the periphery seemed dark and indistinct, whereas all that was before me seemed bright. I also noticed what I thought to be a space between the two optic thalami, and receded down in the direction of the medulla. As I was travelling from the periphery toward the medulla I noticed some faint, scarlet streaks, which, as I watched, seemed to grow into larger threads, and at the same time darker in color. Having reached the medulla I took a look, at what appeared to me, downward (so far as I can recall). I recognized and had a view of all the arteries and other structures in the

neck. I seemed to travel from the medulla down the neck region quickly, and noticed as I went that the arteries appeared to be of a darker color, and appeared to be beating so fast that I thought they would burst, and I began to entertain fears of bleeding to death. I could see the arch of the aorta. At this juncture I gave the signal and said, "It's going like two-forty." The medium through which I saw all this was of a lightish yellow color, which, at this stage (when I gave the sign) was on one side of a line; all was darkness on the other. I took a retrospect for a moment. The next instant I went over the line.

THE INSTINCT OF CREDULITY.

Far be it from us to assert that the credulous are wanting in the medical profession, when every new and impossible remedy exploited upon the bill boards or in private circulars, and every new and impossible form of treatment divulged in the magazines finds some serious blunderer who is willing to give the impossible a solemn trial. It is in the clerical profession that we find a facility for believing that is almost incredible. One here discovers innocence developed into a fine art. There are certain types of mind capable of no more profound operation than that of swallowing whole, and the pursuit of theology seems to increase mental tendencies of this kind until some divines have been known to perform feats of believing that really almost partake of the supernatural. While the members of the ecclesiastical world make a cardinal virtue of believing in so wholesale a way in their own special province, they extend their gifts of credulity to other branches of learning than theology, and charlatans of our own time have taken advantage of this infirmity of the class to "work" them for all they are worth. The doctors of

divinity are now figuring widely in the papers in connection with their favorite remedies, and knowing what these remedies are, the only inference that can possibly be drawn is that the ecclesiastical medicine-taker is a knave, and is in the pay of the quack to publish as personal experiences of his own what we know to be impossible; or a fool and a hypochondriac who has become morbid with endless auto-inspection and whose opinion is therefore of no value whatever.

HOSPITAL ABUSES.

Too much encouragement cannot be given to the hospitals, and their increased efficiency is a matter of satisfaction to all practitioners. The present is, however, a time of transition, and there are a number of grave abuses in this period of this adjustment which will disappear later on, we hope. Originally the hospital was a charitable institution designed for the homeless poor. The advantages of hospital treatment have become so marked of late years, however, that many prefer going to the hospital to being treated at home. They do not go to the hospital because it is a charitable institution for economical reasons, but because of the improved conditions to be gained there. In this way the general practitioner loses a very considerable amount of practice. It is to be hoped that in time there will be little but hospital practice, and that the sick of a community will be cared for entirely in such institutions, where each physician will treat his own cases either independent of the institution or in connection with it. The public hospitals should not be under the general surveillance of a few fortunate physicians, who, while they do not receive any direct remuneration from the hospital itself, still use their connection with it to further their own advantages. Properly speaking,

the hospital should not be set aside for a clique of select professional men to fatten upon, but be the joint possession of all members of the profession.

THE DOCTOR IN POLITICS.

With our congratulations to our confreres who have been successful in the recent elections, and our condolences to the goodly number who suffered defeat upon the same occasion, we feel driven to remark upon the doctor's place in politics. We are aware that the medical man usually remains as far as possible non-partizan, on account of his practice, and hence perhaps has arisen almost an indifference to politics altogether upon the point of the medical man. But it was not from his standpoint that we wished to look so much as from that of the public. Would it not be a great advantage for the general public if the medical profession had a larger representation in parliament than it has. At present our governing bodies are recruited almost entirely from the legal profession, who, I think it is pretty well admitted, use their high responsibility wholly for the purpose of strengthening their own position or that of their class. The very nature of the physician's profession makes of him something of a humanitarian, and a few more such and a few less of the unscrupulous schemers who at present hold place would be better for the country. So many questions of public health and the common good can best be settled by the physician.

MEN OF ONE IDEA.

We have often been struck by the one-sidedness of the medical men, and from those who are not members of the profession one so often hears the remark that So-and-so may be a very brilliant physician but that he is cer-

tainly a very ignorant and unpolished person as regards everything else. We are sorry to say that this is quite true, and in this connection must certainly blame many American colleges for accepting as matriculants young men utterly without the first principles of education. While it is possible to drill into the most untutored mind the principles of medicine, it stands to reason that the standard of the profession would be much higher if the members of it were educated in the broader sense of the word before commencing the study of medicine.

THE ONTARIO MEDICAL ASSOCIATION.

In mentioning city medical societies a moment since we pointed out that a single strong society was the desideratum. It is different when a national society is considered, for in a country as vast in extent as Canada it is quite impossible for any one society to exhibit any efficiency. The society must then be territorial;

and with such limits and held so centrally that the distance will not prove a bar or an inconvenience to anyone in the district. Such a one is the Ontario Medical Society, for which preparations are already under way for the annual meeting in Toronto early in June. This is by all odds the best attended medical society in Canada, and the work accomplished from year to year has had and will have its own quiet effect upon the profession at large.

EDITORIAL NOTES.

DR. STEWART, of Palmerston, who has charge of the Ontario Government's vaccine producing establishment, is suffering from blood-poisoning. His condition is very serious.

The article in our last issue among our special selections, on the "Analysis of Stomach Contents," by Dr. Boardman Reed, appeared first in the *Philadelphia Medical Journal*. By an oversight the name of our valuable Exchange was omitted.

Correspondence.

CITY MEDICAL SOCIETIES.

To the Editor of the DOMINION MEDICAL MONTHLY:

SIR,—Any one attending the various medical societies must surely be sometimes struck with a certain indefinable lassitude or lack of interest in the profession for these gatherings. The cause, we think, is not far to seek. The profession in the city here is so much divided that it is impossible for any society to attain to a healthy growth. Happily we are not broken up into different schools of teaching and various phases of quackery as in the States, but as far as the medical societies go, it is almost as bad as if we were, for there is not a society in the city, we most candidly affirm, that is doing the work that one reasonably expects of it. Surely in

a city where more than four hundred professional men of the same school are practising together, one should expect to find a very powerful medical society. We have half a dozen, but not one where we can ever find more than twenty members present. Look at the reports. In one society we find that the president was present and eight members. In another no one turned up at all, and so on. What is wanted in Toronto is one common medical society where all the members of the profession can express their own and have the views of others. This would be as great a boon as a post-graduate course, and would be of advantage in a number of other ways.

Yours, etc.,
MEDICUS.

INTER-PROVINCIAL REGISTRATION.

To the Editor of DOMINION MEDICAL MONTHLY:

SIR,—Against inter-provincial registration we cannot speak too strongly, while as at present no common standard is aimed at by the various provinces. In Quebec not long since an attempt was made to form a licensing body but was over-ruled by a French-Canadian judge in the case of an applicant who presented a college degree from a French university. While the legal profession in Quebec thus boldly assumes a hypothetical superiority and goes so far as to meddle with the affairs of the medical profession in this way, no licence granted by the Quebec body can surely be regarded seriously by the Ontario Council.

In the Maritime Provinces the standard is fluctuating and doubtful. In Manitoba and in British Columbia the standard is not up to that of On-

tario. By inter-provincial registration, therefore, Ontario would have all to lose and nothing to gain. It is certainly to be hoped that Ontario, above all, will never enter seriously into any such registration.

Yours etc.,

A. G. D.

To the Editor of DOMINION MEDICAL MONTHLY:

SIR,—As the "powers that be" seem rather slow in arriving at a basis for Interprovincial Registration, I beg leave to throw out a suggestion on that head. What is the matter with each province allowing the right of practising to any physician who has been engaged in actual practice in another province for at least five years, and has been duly qualified to practise in that province during that time?

Very truly yours,

A. CRICHTON, M.D.

FLINTON, Ont., March 1st, 1898.

Physician's Library.

The Doctor's Window. Poems by the doctor for the doctor and about the doctor. With an introduction by WM. PEPPER, M.D., LL.D. Buffalo: Charles Wells Moulton. \$2.50; morocco, \$5.00.

This is certainly an *edition de luxe* of what may be called physician's literature. It is a beautiful collection of poems describing the life of the medical man, and that life of sorrow and joy in which he has his career. Many of the authors are themselves practitioners of medicine, but the gifted editor has shown an apt discrimination in her choice, and nothing has been selected which would not have an interest peculiarly medical. Hence Mark Akenside, a physician, and in his time a poet of some eminence, is not represented, because in his poems there is no reference what-

soever to the medical life. Akenside wrote a long artificial poem called the Pleasures of the Imagination, and a number of gingerbread Pindarics which he called odes, and which are about as interesting to read as his prescriptions might have been. Sir Richard Blackmore is also neglected, as his stupid, long-drawn-out epics of Mediæval Princes are of no interest from a medical standpoint, though written by a medical man. Goldsmith, Darwin and Keats are not represented either. The fact that none of these authors had a word to say of their profession in their works calls our attention to two singular facts—the status of the profession in their time and the idea of literature. They were ashamed of their profession as a literary barber might be of his to-day, and so they concealed their disgrace-

ful avocation as well as they could. To-day we would consider a physician of that time a charlatan in every sense of the word, and so it is not wonderful that they were ashamed of being physicians. The literature of that time was not literature at all, but a puerile affectation. The classic writers had described their own life. It was for these dull and very tedious people to make industrious imitations of these descriptions second-hand, instead of describing the life about them. The real picturesqueness of the medical man's life has not escaped later writers, however, and the romance and nobility of it have been caught by many later writers. In this beautiful volume the various phases of feeling and character, regardless of the authorship, are gathered together. The book is sumptuously adorned with engravings, and the binding is tasteful in the extreme. A more appro-

priate book can hardly be thought of for a physician's office, for it contains so much to cheer and brighten the probable readers which it would find in such a place.

The article on EVOLUTION AND THEOLOGY, by the Rev. J. A. ZAHM, a professor in Notre Dame College, Indiana, and more recently a functionary of one of the offices in the Roman Curia, to be published in the April number of *Appleton's Popular Science Monthly*, is of unusual significance and interest. It is the substance of a paper that was read at the International Catholic Scientific Congress held in Fribourg, Switzerland, last August, and is intended to prove that the theory of evolution is not contradictory of the fundamental doctrines of the Church, but is in harmony with them, and particularly that it is entirely consistent with teleology.

Obituary

EDWARD CONSTANCE SEGUIN.

When the history of specialism in America is written three names will stand out prominently as the most active promoters of the study of diseases of the nervous system: S. Weir Mitchell, W. A. Hammond, and Edward C. Seguin. Mitchell and Hammond really created the specialty in this country, but in Seguin, belonging to a younger generation, were combined for the first time the modern methods of thorough clinical with accurate anatomical study.

Dr. Seguin was born in Paris in 1843. He was a son of the distinguished Frenchman, Edouard Séguin, whose researches on idiocy are so well known, and whose physiological method of training of the feeble-minded has been of such inestimable

value. The elder Séguin came to America in 1848, and moved subsequently to New York, where he died in 1880. His widow still carries on his work at her school for feeble-minded, in Orange, N.J. Dr. Seguin studied at the College of Physicians, New York, where he graduated in 1864. He early fell under the stimulating influence of Dr. Wm. H. Draper, to whom he dedicated his *Opera Minora*. Dr. Seguin's many students throughout the country will be glad to learn that this gentleman, his lifelong friend, cared for him tenderly during his protracted and fatal illness. In 1862, Seguin was appointed a medical cadet in the regular army, and served two terms. Later he served at Little Rock, Ark., and was post surgeon at Forts Craig and Selden, in New Mexico. The winter of 1869-70 was spent in Paris under the teaching of Brown-Sequard, Cor-

nil, Ranvil and Charcot, and he became deeply interested in diseases of the nervous system. In 1871 he became connected with the College of Physicians and Surgeons, and founded a Clinic for Nervous Diseases.

While the chief work of Dr. Seguin's life related to diseases of the nervous system, it must not be forgotten that to him in great part was due the introduction of medical thermometry into the United States. His work in this connection must not be confounded with that of his father, who was for years an ardent student of the subject, upon which he wrote many papers and a large work in 1876. In a footnote to the first article in Seguin's *Opera Minora*, entitled "The Use of the Thermometer in Clinical Medicine," which appeared in the *Chicago Medical Journal* in May, 1866, Amidon states: "This article and the observations leading to it form the starting point of medical thermometry in the United States." The work was done by Dr. W. H. Draper and Dr. Seguin while the latter was Senior Assistant at the New York Hospital. This paper is interesting as presenting probably the first temperature-chart in this country. It is called a *record of vital signs*, and gives a chart of the pulse, respirations and temperature. From the earliest period of his career Seguin was a devoted student of nervous diseases, and his papers on aphasia, on infantile paralysis, on tetanoid paraplegia, and, above all, his lectures and admirable series of papers on localization of brain-lesions did a great deal to stimulate the study and practice of neurology. His work on spastic paraplegia preceded that of Erb and Charcot. The careful study which he gave to the therapeutics of nervous disorders stands out strongly in his writings. To him is due what is known as the American method of giving potassium iodid in enormous doses. As a teacher Dr. Seguin had much of the French lucidity to which he was entitled by inheritance, and his class-room at the

old Twenty-third Street School was always crowded with students and physicians. His lectures were models of clinical precision and most inspiring in their freshness and clearness.

For many years Dr. Seguin enjoyed one of the largest practices in New York, and combined all of the best features of a consultant—care and accuracy in diagnosis, scrupulous honesty and wisdom in counsel. Though a specialist, Dr. Seguin had very wide sympathies in the profession, and on several occasions threw himself, with great enthusiasm, into literary ventures. Thus, in 1873, he joined with Brown-Sequard in the editorship of the *Archives of Scientific and Practical Medicine and Surgery*, a journal which did not, however, survive a year. Between 1876 and 1878 he edited a series of *American Clinical Lectures*, many of which are still of great value. His most preteritious venture was the *Archives of Medicine* (the first volume of which was issued in 1879), in which an attempt was made to supply the profession with a high-class journal of medicine. Though Dr. Seguin had the support of the leading physicians in New York, and a number of the younger men throughout the country, the *Archives* did not prove a financial success, and the publication lapsed after the twelfth volume. In the series may be found many admirable papers.

From the shock of an awful domestic tragedy, in 1884, Dr. Seguin never fully recovered. After a residence abroad for two years, he resumed practice in New York, but did not again take up his teaching. Many years before his death he lost one of his fingers, the seat of a spindle-celled growth. Fully two years ago a growth appeared in the abdomen, and of late there were signs of diffuse metastases. From his long and trying illness, which he bore with characteristic fortitude, he was mercifully released on the evening of the 19th.—*Phil. Med. Jour.*

C. F. SNELGROVE.

It is with a great deal of sorrow that the many friends, both lay and professional, learned of the recent death of Dr. Snelgrove, of Meaford. Some weeks ago the doctor met with a serious runaway accident, the effects of which resulted so lamentably. Speaking of his death the Meaford *Mirror* says:

"The death of a skilful and popular physician under circumstances somewhat tragic in their nature was indeed a shock to the community, as all seemed to realize that they had lost a personal friend. Dr. C. F. Snelgrove was born in the township of Euphrasia. His parents, who were natives of the county of Sussex, England, lived about three years in the State of New York after emigrating to America. Coming to Canada, they settled on a property about eight miles west of Toronto, where they

continued to reside for a period of fifteen years. In 1851 the family removed to a farm in the township of Euphrasia, where, as stated above, the subject of this sketch was born. Samuel Snelgrove, father of deceased, held for a number of years the position of Public School Inspector of East Grey, and was also at one time treasurer of the township of Euphrasia. Dr. Snelgrove was a graduate of Trinity Medical College, Toronto, and obtained his diploma in 1885. He purchased the medical practice of Dr. Parsons in Meaford, where he at once applied himself to his professional duties, and by faithful attention and scrupulous regard for the welfare of his patients, soon succeeded in working up a large and successful practice. Dr. Snelgrove was a voracious reader and a fervent admirer of the poets, especially Tennyson and Longfellow. An hour spent in his extensive library was time well spent. In religion he was an Episcopalian."

Miscellaneous

NEW TREATMENT OF GLAUCOMA.—Jonnesco (*Sem. Méd.*, October 20th, 1897) has recently applied the method of bilateral excision of the cervical sympathetic to the treatment of glaucoma. His first case was that of a man, aged fifty, who had suffered from glaucoma for six years and had been blinded for two. Directly after bilateral extirpation of the superior cervical ganglion of the sympathetic, the ocular tension, which had been considerably *plus*, fell to below normal. Vision, formerly absent, improved, so that the day after the operation the patient could count fingers at a distance of at least two metres, and could guide himself while walking. Improvement was maintained up till the date of publication (nineteen days). In two cases since this the results have been very satisfactory.—*Brit. Med. Jour.*

COCAINE IN THE INTRACTABLE VOMITING OF PREGNANCY.—A. Pozzi reports (*Arch. di Ost. e Gyn.*, June, 1897) that at the Obstetrical Clinic at Turin five cases of pregnant vomiting, which persisted in spite of the hypodermic injection of morphine and the internal administration of cocaine, were rapidly cured by Tibone by subcutaneous injections of 0.01 g. of the hydrochlorate of cocaine in the epigastrium, repeated once or twice a day before meals. Food was retained, and neither pulse, respiration, nor temperature was injuriously affected. The general condition gradually improved, the patients gained weight, and the vomiting did not return when the injections were omitted. Pozzi suggests that his treatment may prove useful in other forms of vomiting.—*Brit. Med. Jour.*