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CANADA

MEDICAL AND SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Address delivered by JAMES A. GRANT, M. D., F.R.C.S.,
Edinburgh, M.P. for the County of Russell, President
of the Canadian Medical Association, at the opening
of the sixth annual meeting of the Association, held
at the City of St. John, N.B., on Wednesday, 6th
August, 1873.

Gentlemen of the Canadian Medical Association:—

Exactly six years have elapsed since the first organization of this Association. Our meetings up to the present have been in the Provinces of Quebec and Ontario, but on no previous occasion have we assembled under more auspicious circumstances, welcomed as we are to so favourable a position as the City of St. John; the chief commercial centre of the Province of New Brunswick. From the widespread character of our New Dominion, we could not expect the presence of many from distant parts at these meetings; still, on every occasion, this Province as well as Nova Scotia, was ably represented, and it is a recognized fact, that to the activity, energy and ability of the gentlemen from the Maritime Provinces, who previously filled the Presidential chair, this Association owes in a great measure its present degree of usefulness. Thus we observe that in medical science, as well as in diplomatic affairs, these Provinces have taken no small part in the prosperity of the whole Dominion.

It was with no assumed feelings of humility that I expressed at our previous meeting, at Montreal, my lively sense of the responsibility of the duties that devolved upon me, performed with such marked distinction by my worthy predecessors. I trust that my efforts, however inadequate, will not flag in the accomplishment of what is right and best for that *noble profession* in which we should be, in the strict sense of the inspired words, "members one of another." We have a common estate in the science of medicine. We have a good work before us, and we do well to acknowledge our unity and activity in promoting, by these annual meetings, a oneness of feeling in the profession of the Dominion, and the advocacy of medical science in its most progressive form; side by side with the high-toned and intellectual members of the American Medical Association, alike interested in the advancement of medical science on this continent. Relying on the spirit which prompted you to confer on me the highest honour within the gift of the medical profession of this Dominion, I shall endeavour to discharge the duty as your presiding officer, in this position of trust and responsibility. Knowing, as I do, the great value of time in our short sessions, and how much work is expected to be accomplished, I shall confine my remarks more especially to the appropriate subjects of the occasion. At our previous meetings much time was occupied in the discussion of a Dominion Medical Act, an able draft of which was presented by Dr. R. P. Howard of Montreal. After a lengthy debate, the conclusion arrived at was that this measure should rest *pro tem*. That the Medical Profession of the Dominion should be united by an Act in the Commons, is a point warmly and zealously advocated by many of the ablest members of our profession. By the Confederation Act, unfortunately all matters pertaining to Education, as well as to public health, do not come within the jurisdiction of the

Dominion Government, and consequently are strictly matters of local legislation. It is much to be regretted ; still, by the consent of the Local Governments, much may yet be accomplished, towards bringing about those radical changes, so necessary in order to simplify, in the widest and most comprehensive sense, subjects both educational and sanitary.

In the Province of Ontario, for the first time in this country, the three bodies—Allopathic, Eclectic and Homœopathic—sat in one council and deliberated upon medical affairs. This union was considered somewhat unique, by many staunch old conservatives in the profession. However, when the fact became known that during those nine years, not a single homœopathist or eclectic passed as such in Ontario, the reason of the union can readily be comprehended. A uniform standard of medical education was established, written and oral examinations demanded from each student, and being compulsory, was the means of directing in the proper channel many who might otherwise have found an easier entrance into the medical profession. Recently the chief of the Homœopathic body has seen fit to withdraw from the Council of Ontario, and we anticipate that extra medical legislation may arise, in order to gratify those who consider their professional claims, somewhat ignored. I merely mention the facts, in order that the profession in these provinces may apprehend the nature of that union so heterogeneous and characteristic. The great aim and object of this Association is to cultivate and advance medical knowledge ; to elevate the standard of medical education ; to promote the best interests of the profession, and to direct public opinion, as to the duties and requirements of medical men ; to encourage a fraternity of feeling in the profession in the most comprehensive sense. With these objects in view, on the present occasion three Addresses will be delivered ; one in Surgery, by Dr.

Hingston, of Montreal ; one in Medicine, by Professor Howard, of McGill University ; one in Obstetrics, by Dr. Hodder, of Toronto ; and one in Hygiene, by Dr. Botsford. In addition, a Gold Medal is offered for the best Essay on Zymotic diseases. We anticipate a lively discussion on many points of interest which will doubtless arise out of those papers. We look forward to a greater degree of activity in future in the Association, as general medical topics will occupy the deliberations of all interested in work such as must tend to advance the best interests of our profession in this country.

The subject of medical education is a topic which at every meeting of this Association, has received well-merited consideration. Although somewhat worn, it is of such vital importance that it cannot be too frequently discussed, more especially when we observe the present manifest disposition of the rising generation to rush through a course of collegiate study, and enter into the practice of the medical profession, devoid of that literary training, so requisite in order to develop those powers of thought and observation so necessary, particularly when matters of life and death are concerned.

“A profession that does not equal the age of its educational machinery, that is unable or unwilling to represent its modes of thought, and its forward tendencies in its demands from those who seek admission into its ranks, ceases to be a profession ; because it loses its claims to a scientific character.”

Great changes are yearly taking place in the progress of human thought and human industry, and in each department of science, only those methods are recognized, which rest on an educational basis. A defective preliminary education is the first and undoubtedly the great error in the present system of medical education. There should be one standard of preliminary education exacted in all the Provinces, from those who desire to enter the

medical profession. A greater degree of uniformity now exists, than prior to our discussions on this subject. So long as there is a diversity of interest in matters educational, difficulty will attend the bringing about of that uniformity which would be arrived at by a Dominion Medical Act. Important changes are usually slow in their development, yet we look forward to the time when we shall have one chief educational centre, so guiding and directing the medical profession of this entire Dominion, as to build up an enlightened opinion, such as the members of this Association have at heart. While recognizing the progress of medical education in each Province, and the marked ability of those active in imparting a sound medical training, we must await the spontaneous action of all, alike interested, to extend the principles of confederation we now enjoy, so as to unite us as a profession, strengthen our position as a body, and thus increase our sphere of usefulness.

There is a point to which I would now desire to call the attention of this Association; viz., the advisability of having thoroughly trained female nurses. In private as well as in hospital practice we constantly experience a great want in this respect. In each of the large cities having extensive hospital accommodation, some system might be inaugurated by which those desirous of becoming skilled nurses might avail themselves of the facilities offered, and in course of time supply a deficiency now generally felt in the practice of the profession. Such skilled nurses to obtain certificates of qualification and fitness for the position of honour and trust. Every town and city in the Dominion would gladly encourage the employment of such talent, and in that sphere woman would occupy her true position as the administerer of the prescribed medicines, capable as she is of those soothing, delicate and kindly attentions, so necessary at the sick bedside, and so cheering and gratifying to the patient. Miss Nightingale has thus fully expressed her ideas :

"I think the Anglo-Saxon would be very sorry to turn woman out of his own house, or out of civil hospitals, hotels, institutions of all kinds, and substitute men-house-keepers and men-matrons. The contrast between even naval hospitals, where there are female nurses, and military hospitals, where there are none, is most striking in point of order and cleanliness."

In point of sanitary domestic economy, woman carries off the palm, and, by her tidiness and cleanliness, establishes a degree of order seldom seen without her. The cheering look, the tender hand, the watchful eye, and the innate powers of observation, are such, that many little necessities for the sick patient are carefully thought of, that might escape the sterner powers of the skilled and educated physicians.

The Sisters of Charity, who officiate as nurses in the Catholic hospitals of the Dominion, have by their skill, dexterity and general neatness, earned a well-deserved reputation. Why should not the Protestant Institutions of Canada have a sisterhood alike charitable and philanthropic?

The subject of medical evidence in courts of law is one possessing no ordinary degree of interest. The value of such evidence in questions involving the causes of death, by unknown means, has been long recognised as having attained, with the various achievements of science, a remarkable degree of accuracy.

The position of the scientific expert is one of great importance. His deductions are based on a sound knowledge of human structure; of the laws which regulate the organic functions; of the chemical laboratory in the system, possessing an action and reaction peculiarly its own; and of the disturbing forces, which induce death, under extraordinary circumstances. The courts of law at home and abroad consider such testimony of great value, and upon it frequently hinge matters of life or death. In

carrying out such investigations both a thoroughly scientific knowledge and a perfectly disinterested mind are necessary. The great aim and object in view is to bring to the surface the principles of truth and honour, no matter how trying the attendant circumstances. Medical men should bear in remembrance the responsible and dignified position they are called upon to fill in medical enquiry. It is not upholding the status of our profession to find its members become partisans in courts of law. Cases of malpractice are not, fortunately, of frequent occurrence, and when such do arise the professional man should never be found occupying an unenviable position, as the instigator of enquiry for purely selfish and personal motives. The whole profession suffers by disregard to ordinary professional courtesy. In courts of law our opinions wield a recognized power and influence, and it is gratifying to observe that in the various medical schools, the subject of medical jurisprudence is receiving well deserved consideration. Through the various medical Societies any professional irregularities in the law courts should be reported, and, by this Association a power exercised that would be productive of the most beneficial results. Regularities as well as irregularities should be noted by those interested in the welfare of the medical profession. In Canada we are yearly enlarging and increasing our medical periodicals, which give evidence of improvement by the abundance, variety and general excellence of the various contributions and selections. How is our Canadian Medical literature to be supported? This is a question which must strike forcibly the most ordinary observer. In the larger cities as well as the rural districts there are those who, from their position, experience and knowledge of matters medical, could do much towards building up in this country such an expression of opinion as would tend materially to strengthen and consolidate the very best interests of our profession. It is generally acknowledged that there are

more medical journals than receive remunerative support, and that much labor, zeal and self-sacrifice are necessary on the part of both editors and publishers in order to promote the vitality of this form of medical literature. Such efforts are worthy of the highest commendation, for by means of local medical journals many facts are brought to light which otherwise might have passed unrecorded. In Canada, as in Great Britain, hospital reports are yearly acquiring a greater degree of importance, and our medical students are being stimulated thus towards the cultivation of one of the most necessary branches of study—viz., to observe rightly and report intelligently. The country as well as the city practitioner should contribute regularly to our journals. The city with its extensive hospitals, large libraries, well organized medical societies, has very great advantages ; and yet it has been remarked by an able writer in favor of the country medical man, that "original thought is usually best cultivated in comparative solitude." A high degree of excellence in medical journalism can scarcely be expected in so new a field of enquiry, and considering the efforts put forth to fan into vitality such able journals as the *London Lancet* and *London Medical Times and Gazette*, *Edinburgh Medical Journal* and others of like celebrity, we should not be discouraged. In the recording of medical facts, it is prudent and right that such should be communicated plainly, avoiding, as far as possible, newly-coined words and abstruse phraseology, which in no way whatever will be acceptable to the plain, common sense practitioner. It is common sense which is required at the sick bedside ; it is this sense after all which achieves the greatest degree of success, educated, enlightened, and elaborated through the various scientific achievements and astounding discoveries, of this age of progress. Every physician in regular practice in city and country, should not only take one or more medical journals, but contribute as well. A large and lucrative practice, a

high and influential position, are not alone sufficient to perpetuate a worthy name and reputation. These are perishable and will die out, when well-timed and well recorded facts, will last and establish true and genuine worth. ZIMMERMAN remarked "that the greatest medical writers of any age were the best physicians." Those who communicate their views should rather be encouraged than decried. It is quite unnecessary to urge upon those who read the best medical journals, the importance of such publications. It is high time that those who fancy they can learn nothing from medical journals, should retire and leave the field to those more willing in every respect to keep pace with the progress of medical science in its various departments. Let us then as an Association encourage and uphold our journals and contribute in every possible way towards building up and sustaining so worthy and so requisite a branch of literature.

In conclusion I would merely advert briefly to the subject of Sanitary Science, identified as it is with national progress and surrounded at present with a more than ordinary degree of interest. We are daily in possession of telegraphic news as to the prevalence in the Southern States of a much dreaded disease. Under such circumstances, I cannot permit this opportunity to pass without calling upon all interested to bring about, in every possible way, such sanitary measures as will tend to lessen the spread of cholera, should we be so unfortunate as to have a visitation of that disease. In the absence of danger, sanitary measures are frequently lost sight of, and even a moderate expenditure is a sufficient cause for the delay observed in carrying into operation the necessary precautions. While there is no occasion for alarm, there is a necessity for action on the part of health authorities. Mr. Simon, the Medical Officer of the Privy Council of England says: "The dangers which particularly have to be guarded against, as favoring the spread of cholera contagion, are

particularly two : first, and above all, there is danger of water supplies, which are in any degree tainted by house refuse or other like kinds of filth, as where there is overflow, leakage, or filtration, from sewers, house drains, cesspools, foul ditches, or the like, into streams, springs, wells or reservoirs, from which the supply of water is drawn, or into the soil in which the wells are situate, —a danger which may exist on a small scale at the pump of a private house, or on a large scale, in the source of supply of public waterworks ; and, secondly, there is the danger of breathing air which is foul with effluvia from the same sorts of impurity.”

Filth percolating into well water is a very fertile source of disease. The report of Dr. Ballard, of Islington, concerning the propagation of enteric fever, by milk polluted with enteric fever poison, through leakage into the well which supplied the cattle with water, is conclusive evidence as to the occasional origin of so trying a disease.

The subject of sanitary legislation is one of vast importance inasmuch as by preventable diseases, thousands of lives are lost which might be saved annually. We require fresh air, pure water and clean food ; this brought about, even in a moderate degree, would confer an inestimable blessing on society at large. So strongly impressed are the members of the American Medical Association on this subject, that at their last meeting at St. Louis in June, a strong resolution was passed recommending the establishment of a “National Sanitary Bureau,” with relation to the general Government at Washington, similar to the Bureau of Agriculture. It is quite evident, considerable new life must be thrown into this subject, and should sanitary regulations be thoroughly and systematically carried out, by skilled operatives, the advantage which would accrue to this Dominion would be beyond computation. An enlightened opinion would thus be built up, through the exercise of which, we might possibly

effect such sanitary changes, as would be most conducive to the best interests of the general public.

Gentlemen of the Canada Medical Association,—We have assembled here for very important purposes, the eyes of the community at large are upon us, watching, cheering and guiding us along, in the performance of duty. At best we have only a few short years before us, and in the multiplicity and diversity of work, a single life can accomplish but little. Let that little be well done, keeping steadily before us the remarkable and striking aphorism of Hippocrates, which has been paraphrased by one of our greatest lyrics :—

“ Art is long and time is fleeting ;
And our hearts, though stout and brave,
Still like muffled drums are beating
Funeral marches to the grave.”

A general view of Hygiene and what its study really includes. An address delivered before the Canadian Medical Association at its Annual Meeting, August 6th and 7th, 1873. By L. B. BOTSFORD, M. D., St. John, N. B.

Mr. President and Gentlemen :—

The mind of man is so limited in its working that when earnestly engaged in the investigation of a subject it is almost certain to lose sight of the due proportion of things, so that one object shall loom up in large dimensions and assume an importance not justified by a broad view of our relations to the whole kingdom of nature and thought.

Hygiene forms no exception to this, though its importance can scarcely be over-rated if we accept its definition to be “*The application of all the elements which conduce to the health and amelioration of society.*” This de-

definition will include every department of physical nature ; also the evolution of the moral and intellectual powers of man. The air we breathe, the water we drink, the food we eat, the social habits we form, the climate we live in, the government which presides over us, all exercise their influence and singly or in combination shape our physical state, now degrading us steadily to a lower level, or it may be, as steadily lifting us by the silent operation of centuries to a higher state of being. The effect of external circumstances upon the character of tribes and nations are apparent. Wherever man exists the same causes tend to produce the same results upon his organization, also upon his mental characteristics. It does not matter which view we adopt of his origin. Whether we believe that he starts from different centres, or, whether we attribute his presence to a common source. Great differences do exist, differences which are now peculiar to, and mark the peoples of the various sections of the earth ; each section tending to produce certain marked features, and perpetuating these through long periods of time. Scientific investigation will probably trace many links in the chain of causes which produce these modifications ; for science will continue to knock until the door is opened and the light shines upon what is now shrouded in darkness. In connection with this general aspect of the question we would ask, whence come the steadfastness of purpose, and the Northern vigor so different from the impulsive character of the South ? whence the mental and social states which mark the government in the different climates ? So marked and stamped upon the Northern and Southern peoples are these, that, as has been truly said, " We might as reasonably expect to educate the Bengalee into the Mongolian, or the Italian greyhound into the Newfoundland dog as to teach the Hindoo how to enjoy and maintain a free government. Ten centuries would

be uselessly spent in the attempt to annul the climatic effects of fifty or sixty, perhaps a hundred centuries!" General views of this nature should impress upon legislators the assistance they might derive from a knowledge of vital relationships, if they would act upon broad and far-seeing principles. But it perhaps is too much to expect that men will so act until the demand for legislation is too palpable to be overlooked. To the medical man they are important as they will lead him to a more correct estimate of circumstances which may be of service to the well-being of those who commit their health to his charge. For a knowledge of the effects of climates in forming certain temperaments and conditions will enable him to meet the requirements of special cases even by artificial means. Whilst these general causes act over large areas there is a multitude of minor agents which are probably more important as to their influence upon communities and which more or less affect vitality in every locality. Among these, diseases general and local take a prominent stand, and more prominent than disease itself, are those conditions which acting upon the animal economy, weaken its powers of resistance and render fatal what would otherwise be a passing disturbance.

Our profession stands first and pre-eminently first in its qualifications for investigating this broad field of causes. The law-maker may apply his regulating powers when he has sufficient knowledge to act. The divine and philanthropist may urge the consciences of individuals or communities to obey the requirements which reason and law would enforce. Yet, though the legislator and the moral teacher may both help in demonstrating the many evils to be avoided, and both be necessary in the great work of advancing the race,—as to the knowledge of the principles which tend to the amelioration of society, the medical man, by his acquaintance with dis-

ease, by study of the circumstances which enter into its production or prevalence, must occupy the vantage ground in hygienic investigations. He knows best what value to place upon collected data, and is ever seeking for causes to account for them. Most if not all the reports upon sanitary matters have been furnished by him, or he has supplied the data upon which they are based ; and in the future this must continue to be the case. Medicine is a noble profession and we cannot too highly esteem the men who adorn it in their endeavors to remedy the ills, and assuage the pains of their fellow-men. And Surgery which grapples with the destroyer and snatches many victims from his grasp stands in the fore-ground of high praise, yet both must be regarded as *specialities* in themselves. Advanced as they are and wonderful as they are, they but contend with the visible results of noxious principles. A much higher, and a more advanced position will be that, which will occupy itself with the numerous and ever working conditions which are the fruitful *sources* of disease and suffering : an ignorance of which may render futile the most masterly performances of the surgeon's hand. Medicine may do battle, even successful battle, with the armed men who spring up from the sown dragon's teeth, Hygiene destroys the seed ere they touch the mother earth. Surgery, like Hercules, may strike off the heads of the Lernean Hydra ; Hygiene, Iolas like, sears the roots from which they continually re-issue.

It must be evident to all that in order to establish a true Hygienic system the foundation must be laid by a thorough registration of the deaths which occur ; these must be registered not by practitioners as such, nor in limited areas, but must be exacted by a government system, general in its operation and embracing a whole people. That advances are being made in this direction I will quite a few remarks of Dr. Acland. At a late meeting of the Social Science Congress, he said : " We

must find out a way of getting at the precise data of mortality—the rate of life in all civilized portions of the world—such was the astonishing success that the Registrar general was actually able to tell us at breakfast once a week, how the people are getting on, not only in Oxford, London, Manchester and so forth, but he told us also of New York, Vienna, St. Petersburg, of Bombay and of Bengal.”

A mere record of deaths can be accurately accomplished by any civil machinery, but will be of little use, unless the cause of death is also ascertained. At this point comes in the importance of the medical profession, an importance increasingly acknowledged when the effort is made to ascertain the remote and subtle influences which intensify the death rate.

As the rate is not uniform (1) but varies in different localities and at different periods, the next step will be

I DATE RATE NOT UNIFORM.

Death per 1000.		1868.	1869.	1870.	Density of population to acre.			
Cities.	{ London....	23.4	24.5	24.0	40			
	{ Manchester	32.0	28.8	27.8	90			
	{ Liverpool..	29.1	29.9	31.1	96			
Death per 1000.		1865.	1866.	1867.	1868.	1869.	1870.	1871
Wards in Liverpool	{ Scotland.....	38.6	43.4	26.8	28.2	27.9	29.1	40.7
	{ Vauxhall.....	49.0	62.0	35.3	33.2	38.8	43.9	43.2
	{ Castle street..	26.5	27.0	20.2	17.7	18.9	18.1	31.1

Improvements by removing houses and opening up streets reduced the mortality from 29 per 1000 in Castle street in 1853, a healthy year, to 20 per 1000 in 1863, a sickly year. (Trench for 1863, p. 15). This has continued since.

Average age at death :

Wards in Liverpool.	{ Scotland.....	16 years.
	{ Vauxhall.....	18 “
	{ Castle street.....	32 “

Mortality according to density of population :

Mortality	14.15.16	Population	86	to square mile.
	17.18.19	“	172	“
	20.21.22	“	255	“
	23.24.25	“	1128	“
	26 and upwards	“	3399	“

(Registrar General's Annual Report.)

to ascertain the conditions which precede or attend the mortality, and this opens up all the causes which diminish the vital powers of man. Among these may be ranged; mental depression, social habits, local influences, meteorology in all its phases, food and drink, overcrowding, bad sewerage, and whatever in fact tends to undermine the functions of life, and subjects the animal to premature death.

I have drawn up a table (2) which shews at a glance some of the many points which Hygiene has to consider, and will make a few remarks upon the several subjects, commencing with those lowest on the list; and as I proceed will but allude to the connecting links which bind them together.

Diseases which are communicable have long occupied the attention of Governments, as well as of the profession. They are palpable, and force their consideration upon all. Terrified by the destructive power of some,

2 REGISTRATION OF DEATHS AND CAUSES.

Hygiene.	Sentiments	Ethical.	Laws.	Aggressive.
		Theological.		Preventive.
	Intellect.	Humanitarian.	Customs.	Habits.
		Regulating and Adapting.	Government.	
	Animal and functional.	Locality.	Noxious or otherwise.	Temporary.
Food and drink.		General and Local.	General condition.	Quantity.
Meteorology.			Quality.	Air.
Diseases.		Induced. Epidemic. Zymotic.	Hygrometrical.	Barometrical.
	Inherited.		Personal.	Epidemic.
	Character.		Intensity.	Propagating power.

Governments have been compelled to take measures to avert evils, which sweep our kingdoms and are not stopped in their course by the widest oceans. A wild terror has too often suggested means of prevention, and Quarantine, right in itself, has frequently violated all common sense. To say that a disease is communicable suggests at once the idea that it can be limited, and to accomplish this, regulations, communal and imperial, are made. These regulations require to be based upon a great deal of accurate observation and a great deal of philosophical thought. For, however much may have been done there exists still a great ignorance of the conditions of several of these diseases, and until a more exact knowledge is attained errors in Quarantine must arise. Medical men even differ upon the essential characters of several of them, some medical men maintaining those to be epidemic, which others as firmly maintain to be communicable, whilst both may be ignorant of the region to which the propagation may be limited. The characteristics of *one*, however, are too palpable, and small-pox, one of the most virulent, has to be met by the most stringent isolation. The office of Hygiene will be to ascertain the exact nature of these scourges: the virus which propagates itself in the animal economy; their epidemic character, whether it depends upon the increased *subjective* poison, or upon the *objective* conditions, or upon both; their prevalence, whether general or local. When these conditions are known, then, we may look for wise legislation in the direction of a thoroughly sound Quarantine.

Of epidemics pure, and their causes, but little is known.

Diseases personally induced form a large class and arise from causes which being generally known can be avoided. The tendency to perpetuate the same action will cause some which are the result of personal contact to be ranged under the next class which comes under

our observation—that of inherited diseases. They are numerous and deeply interesting, and they are the result of a train of external circumstances which acting during a longer or shorter period impress a character upon the animal economy.

The death rate of these several diseases may be tolerably uniform, but they are subject to influences which may greatly increase or modify their intensity and mortality, and it is to these influencing data that our further attention must be directed. Taking inherited diseases for our illustration, they are the result of tendencies already brought into existence by exposure to external causes aided by the habits of life of previous generations. A concentration of these causes will develop a further increase of the same diseased action until the death rate shall be greatly in excess of the average, so that when depressing agencies lower the vital resistance the disease will assume the character of an epidemic. Scrofula is undoubtedly an inheritance, and yet may not scientific Hygiene determine the conditions which are favorable to its production, and may not the tendencies to such diseased action be steadily beaten back by a removal of the disturbing elements which called it into being and activity? The disease cannot be original, for who of living men would be exempt, and if induced why may it not be eradicated? (3)

Death may and often does become more frequent owing to disturbing causes which act injuriously upon the vitality

(3) TUBERCULOSIS.

The chief effort of sanitary science in combating the prevalence of Zymotics, is to destroy and arrest their infection and contagion; but the scope of its endeavors must be greater when the Tubercular Diathesis among the people is to be counteracted. Then the chief desiderata are warmth, clothing and food which are within the province of individual or of family arrangements; and fresh air, exercise, and relaxation from daily toil which must for their indulgence receive the help of municipal or of national policy. (Trench, 1869, p. 35.)

of communities, and Hygiene can only become acquainted with these noxious elements by an extensive observation of the physical conditions which so operate, and among these meteorology holds a prominent place. Climate, which embraces variations in the relative degree of moisture and temperature, differences in the barometrical and electric state of the atmosphere, exercises a modifying power over the system. The physique of man in different countries shews this, and sometimes we may expect a deterioration of a race by a change of climate until an adaptation to the new conditions is developed. It is questionable whether the constitutional characteristics of the people of this continent will not require a long time before they settle down upon a permanent basis.

Some causes are so palpable that their results are recognised at once, and yet simple as they appear are so mixed up with other disturbing elements from a common source that they require careful elimination before their true value can be realized.

Cold affects the mortality of the aged and we might naturally expect this, for when age advances, the power of generating animal heat becomes less. On the other hand the greatest death rate among the young is during periods of highest temperature. (4)

(4) COLD AND HEAT AFFECT MORTALITY.

Average of 10 years, Liverpool.

	Quarters ending		
	March.	Sept.	
5 years and under	1898	2139	241 more.
60 years and upwards	564	361	203 less.

Under 5 years the mortality was :

Wards,—Scotland.....	60	per cent.
Vauxhall.....	60	of whole deaths.
Castle street.....	42	

Diarrhoea Tables extending over several years illustrated.
(Trench, 1866, p. 11.)

The air we breathe may be charged with death. (5) The effects of continued moisture or of an electric state of the atmosphere can only be determined by observations over large areas, liable however to errors, as the conditions may give rise to many and subtle influences.

The food we eat (6) and the liquid we use (7) constitute important items among the causes which tend to affect the stamina and vital powers of man. The quantity and quality of the first (Trench for 1863, p. 6) at various periods and under varying circumstances. The conditions under which water, coffee, tea and other liquids are most beneficial require observation. Theory cannot solve the question unless theory is based on facts.

Locality must be well considered to elicit the results which may be common from similarity in geological, meteorological or topographical conditions, or in more limited areas which may arise from disturbing elements such as animal or vegetable emanations.

The phenomena which are grouped rightly or otherwise under the head of "Intellect" largely affect the organism of man, and it is a question whether we do not have

(5) DUBLIN LYING-IN HOSPITAL.

74 years ago, of 17,600 children born in the institution, 2,944 died within the first fortnight,—17 per cent. Dr. Clarke considered a foul and vitiated state of the air of the wards a principal cause. Arrangements were adopted by which a free circulation of air was secured through the wards; of 8,033 children born subsequently, only 419 died, or $5\frac{1}{2}$ per 100. Under additional improvements a further decrease of the death rate—of 16,564 born, only 286 died—about 1.7 per 100.

Trench, 1863, page 15. Castle street :

In 1853 and 1863,

From 29 to 20 per 1000,

—Or see note 4 page 115.

(6) Want of food at the commencement of the American war, and the increase of fever were contemporaneous.

(7) PURE WATER.

"The effect of water is well illustrated by the experience of the Mill Bank Prison. In 1854 the water from artesian wells was introduced, and the result has been the virtual extinction of typhoid and other diseases of same class which frequently prevailed in the institution."

to deal with elements more destructive to human life than from all the causes we have previously noticed, inasmuch as all these are intensified by the social condition of the race. Governments which vary in their tendency to elicit human thought and the developement of self-government and individualism will vary in their power of grappling with social evils. Despotism which dwarfs and represses thought can only be surpassed in evil results by the licentiousness which characterises the other extreme, when every man does that which is right in his own eyes.

Customs which prevail in communities produce in individuals those habits which are injurious or beneficial, and both are apt to escape strict investigation as they commence with our existence and are strengthened with our growth. We look upon the fashion or custom of the Chinese woman who represses the growth of her feet and the still more injurious fashion of the European or American who contracts her breathing space as violations of natural laws, and yet there are evils connected with our every-day life more injurious from their numbers, which if the attempt be made to overturn them, the great mass of society will resent as unnecessary interference.

Custom prevails in our buildings, in our ventilation or rather want of ventilation, (8) in our eating, our clothing

(8) CUSTOM,—INTEMPERANCE,—CHOLERA.

A death from cholera:—“When I went again to hasten the funeral I found the whole place reeking, and with the loathsome and disgusting emanations of drunken unwashed bacchanals. The three houses were crammed with men, women and children, while drunken women squatted thickly on the flags of the court before the open door of the crowded room where the corpse was laid. There had been in the presence of death one of those shameful carousals which still linger as dregs of ancient manners among the funeral customs of the Irish peasantry. Suffice it to say that before a week had passed, Boyle, the husband of the woman was also among the dead, and before the end of July 48 persons had died from cholera within a radius of 150 yards from the court which had been the scene of the ill-timed revelry.”

(T. for 1867, p. 23.)

and drinking, and from childhood those social habits are so familiar that they pass unquestioned and yet every fact of our every-day life might be based upon a scientific foundation. It is only of late that attention has been directed to them.

There is one custom of society which as yet has had but a slight investigation, however fearful the results which a partial lifting of the veil has disclosed.

The drinking *custom* (9) is yet too strongly rooted to permit a candid and honest consideration. The mortality directly arising from the effects of alcoholic drinks forms quite a percentage of the annual death-rate; but who can tell the number it adds to the general percentage by diminishing the powers of resistance to disease which might not otherwise be fatal?

Overcrowding whether of dwellings or of localities increases the death-rate and it is only by the most perfect Hygienic arrangements that injurious results can be prevented when the population in any given area becomes numerous. (10)

(9) T. for 1865.—Intemperance among the poor is at once a cause and result of destitution. It first inflicts upon the family the sufferings of abject poverty and want. Then a greater evil. For by debility of starvation and nervous exhaustion of misery is engendered an insatiable craving and thirst for the stimulus of ardent spirits.

LIQUOR TRADE AND CONSUMPTION.

“The people of Great Britain are spending in drink \$500,000,000 a year. A trade has grown up with a capital of \$600,000,000. A trade more powerful far than the cotton industry with its capital of \$400,000,000, and which after all, in its legitimate exercise provides but a luxury, and in its illegitimate, the most insidious of all social temptations.”

(10) INTEMPERANCE AND OVERCROWDING.

“The result of the enquiry is the conviction supported by a mass of evidence, that the proximate causes of the increased death rate are Intemperance, Indigence and Overcrowding: These two latter being generally found in the train of intemperance, although all three act and react on each other as cause

It is through the agency of the intellect that we must look for a regulative of the conditions which will result in the greatest possible physical good; and these regulations can only be wisely made when observation has laid the foundation by recording all the possible facts connected with disease and death, and just in proportion as this is done will legislatures be enabled to enact their laws upon a scientific basis.

In the system of prevention, Quarantine occupies a prominent place and to be efficient requires an accurate knowledge of diseases, their methods of propagation, and the best means of keeping them from spreading.

The aggression laws over-ride individual and communal rights, (II) when the exercise of those rights might be injurious to the people generally. Compulsory sewerage, restriction as to buildings and the number of occupants (note 3, page 114,) width of streets and the measures which require the exercise of a restraining legislation.

In Great Britain sanitary regulations though numerous before 1848 were in that year included in a general Act,

and effect. Your committee need not here set forth in detail all the evils consequent on intemperance. The evidence abundantly shews that the vice is alarmingly prevalent among the laboring population, and that its wretched victims and their families sink rapidly into squalid poverty resulting in overcrowding and its attendant evils."

Trench, 1863, P. 15.—St. George's district including Castle St. accounted for 29.1 per 1000 in 1853, a healthy year, and gave 20.6 per 1000 in 1863 a sickly year. Cause—removing houses and opening up streets.

14, 15, 16 death per 1000; population being 86 per square mile)
26 and upward deaths 1000 do do 3399 do

(Trench report for 1871, p. 7.

Percentage of deaths under 5 years to whole deaths in each ward.

Wards,—Scotland 62.9

Vauxhall 56.1

Castle Street 41.3

And this ratio has continued year after year.

(11) The necessity of this is seen by note 1, page 111.

and a system inaugurated by which every part of England could avail itself of law to carry out necessary reforms.

A few remarks upon the sentiments will close my notice of the subjects contained in the table. They must necessarily occupy a place among the influences which operate upon the whole man. They form the substratum of our duties, and when exercised in their due relationship are conducive to a healthy state of mind and body; whilst, on the contrary, they may injuriously affect not the individual only but the masses. Hopeful expectation has been the cause of the success of many a quack, and it is a good working ingredient in producing a reputation for the regular practitioner; on the other hand the absence of hope demoralizes the man, prostrates his energies, renders him the easy victim of disease, and drives him to vicious indulgence; and when pestilence has commenced its ravages, how many rushing for refuge to stimulants have become the food of the plague.

The magnitude of this question has compelled me to curtail my observations to the smallest compass upon the numerous subjects, any one of which would require more than one thesis to elucidate.

My object has been to give a bird's-eye view of what the study of Hygiene really includes.

When we look back we find that general education embraced almost every thing except those relationships which man holds to the physical world, with which he is every moment coming into contact.

He was taught to lift his eyes to the very stars, to scan their movements and to measure their distance, and yet was left in ignorance of the effects of his cramped-up rooms and of the mephitic air which entered every moment one of the citadels of life. Knowledge of every department of nature has been accumulating until creation has been spoiled of its teeming facts and it is now only that the necessity is felt, that man who is the creature of

the influences around him should devote his study to the circumstances which mould his destiny.

To secure a Hygienic education we must look to three sources:—Governments, Universities, and Individuals. From individuals as such or associated, and chiefly from men in our profession will come the condition of localities, the elements of disturbance, and all the facts which require a quickened intelligence to eliminate as bearing upon the question. Whilst Governments *only* can obtain returns of vital statistics from a whole country by compelling a registration of deaths and the causes of death, (12) they also can secure meteorological observations from all quarters, and by a central department have all the data collected and tabulated. But chiefly upon the centres of education (13) will devolve the duty of imparting to their alumni the knowledge obtained from all sources, and if in every medical school there was a Professor of Hygiene, who does not see that with leisure and ability to investigate the numerous facts now being collected such Professors would be able to generalize and elicit the relationships which exist among all the phenomena of life, and to place intelligibly in a few months before their students more than could be attained in a lifetime of individual exertion amid the cares of a professional career. And not only so, but in *every* University there should be established similar chairs so that the relationship between man and his physical surroundings should form a part of the education of those, who in the nature of things must be the future legislators of the land who, thus in-

(12) We have no registration of deaths in New Brunswick though before Confederation several attempts were made to secure law.

(13) In Dublin there is a chair which treats upon Law, Engineering, Pathology, Vital Sanitary Statistics, Chemistry, Meteorology, and Medical Jurisprudence. King's College, London, established a chair of Public Health, called Professor of State Medicine. Upper Canada has also a chair, and Bishop's College, Montreal.

structed, would be ready to legislate wisely, and intelligently, instead of groping their way in ignorance.

And who can tell the grand results, when the material condition of the race shall be advanced by enlightened sanitary knowledge and regulations. When the causes of disease are attacked in their strongholds, when rational amusement shall supersede the discordant sounds of the revel; when the wants of the system shall be satisfied with proper foods; when the physical state of man shall be elevated, and reacting upon his intellectual and moral powers shall lift the race to the highest possible attainments.

Case of gun-shot wound of head.—Death.—Reported by
T. G. RODDICK, M. D., House Surgeon, Montreal
General Hospital.

J. M., æt. 18, a strong athletic youth, while carelessly handling a pistol on the evening of the 7th July, 1873, shot himself through the head, the bullet entering the right temple. The accident occurred about four miles from the city of Montreal. Dr. Scott and myself, who had been sent for, were in attendance on the case a little over an hour after the accident; but in that time a large quantity of blood had been lost from a wound of one of the smaller branches of the temporal artery. He had not been coherent from the instant the shot was fired, but fell immediately from the swing, on which he was seated, to the ground. We found him lying on his back on a mattress arranged on the floor, with his head resting perfectly motionless on the pillow, while his legs were constantly drawn up and again, extended in a deliberate but restless manner. There were no convulsions and no sign of paralysis in any part. The countenance was blanched to the last degree; pupils equal and normally

dilated ; no squinting or other sign of basic irritation ; pulse 140, extremely shabby and irregular.

As to the injury itself, there was a scalp wound resembling a simple clean incision, an inch in length and gaping, situated about an inch and a half above and an inch behind the line of the external angular process of the frontal bone. The central portion of this incision was occupied by a circular opening in the bone leading into the brain. The probe could be passed through this opening for a distance of two inches, in a direct line across the brain without interruption from any cause. There seemed to be a perfectly open canal through the substance of the brain in this direction. The experiment was not tried as to how far the probe could really pass without meeting resistance. From the condition of things discovered after death, there is not the least doubt, however, that it might have been carried on to the bone beyond without difficulty, and little if any danger. There was no opening of exit. The weapon was the very diminutive single-barrelled breach loading pistol generally worn in the waist-coat pocket, carrying a conical bullet. If spoken to sharply he was aroused for a moment from the semi-conscious condition in which he lay, would mutter a reply more or less coherent and again lapse into his former state. Nothing definite could be elicited from him respecting the accident.

The treatment employed was simply the application of ice-water to the head with an occasional tea-spoonful of very weak brandy and water. Strict quiet was enjoined, and he was to be constantly guarded, as he at times threatened by his movements to do violence to the wound on account, no doubt, of some irritation in that part. He has passed water in bed since the accident.

Early the following morning, the pulse had fallen to 110 and was of better volume. Otherwise his condition remained unaltered. Brain matter protruded from the wound.

During the forenoon, however, he improved rapidly and could be aroused sufficiently to describe the accident, though imperfectly. Late in the afternoon, a violent reaction set in as indicated by general capillary congestion and increase in temperature. From being blanched the countenance became scarlet, the conjunctive suffused, and the head extremely hot. The thermometer indicated a temperature of over 105. This condition lasted for about four hours.

July 9th.—He was extremely restless during the night, kicking off the bed-clothes and moving his arms about in a spasmodic manner; pulse 104 and of good volume; when roused he converses freely and expresses himself as free from all pain in the head; while sleeping his body occasionally starts but the head never stirs from its place on the pillow; he has been noticed also in his sleep to pick at the bed-clothes; but this symptom is not constant and only momentary; tongue slightly dry. He took in the shape of nourishment a pint of milk during the night and has taken a cup of beef-tea this forenoon. The wound is constantly filled with softened brain matter. The iced applications are still to be continued. Was ordered a dose of castor oil which speedily operated.

He remained precisely in the condition above noticed for the four days succeeding, excepting that his pulse gradually fell each day until on the 12th July it was 84, full and regular. He took in this time large quantities of milk daily, and would ask for the urinal when required.

July 13th.—When seen this morning by Dr. Scott and myself we found a marvellous change for the better; pulse 78, full, but slightly intermitting; countenance placid; temperature normal; he converses cheerfully and without effort to those about him. He feels no pain or uneasiness and talks of getting up if permitted. Brain matter is still coming away on the cloths applied to the wound, which latter looks comparatively healthy. The

same precautions in regard to perfect rest are still enjoined.

The day following (14th), the improvement in his general condition continued and induced us to the belief that a temporary recovery might yet result. We, therefore, on mature deliberation gave a somewhat favorable prognosis to the friends, being under the impression that the foreign body might have nestled itself in some nook of the skull or had traversed a section of brain substance, injury to which might not prove immediately fatal.

At our visit on the 15th, however, we found reason to alter our prognosis. We learnt from the friends that on the afternoon previous or very soon after we left him, the patient became suddenly restless and feverish, complained of great headache and refused the food and drinks he had before so largely partaken of. These symptoms increased during the night and when we arrived he was in a semi-conscious condition, with rapid pulse, flushed face, and hurried breathing, in fact, in almost precisely the same state as described on the second day. He was aroused with very great difficulty and then answered only in monosyllables and often unintelligibly. The wound looked less healthy, the surrounding skin having a congested appearance. His bowels had moved freely during the night, and he passed water regularly.

17th July, 11 A.M.—Yesterday we found the patient in somewhat the same condition as on the day previous, but this morning he is evidently dying. Within the past twelve hours he has become rapidly worse, and now lies in a comatose condition. The entire surface of the body is purple from venous congestion; there is a convulsive movement of the right side, the eyes remain widely open, and there is external strabismus. The bronchial tubes are gorged with secretion.

He gradually sank and died about eight o'clock the same evening.

Autopsy.—On the order of the coroner's jury a post mortem examination was held about twenty hours after death.

Head.—The scalp being dissected off we found in the skull an almost perfectly circular opening opposite the position of the external wound. The probe was passed through this opening and made to follow the *trajet* of the bullet in a direction horizontally across the skull to nearly the same position on the opposite side. A large mass of brain matter protruded through the opening in the bone. On removing the calvarium the dura mater was noticed to be intensely injected. It presented a large rent in comparison with the size of the external openings, which may have been due probably either to sloughing or retraction of the membrane. A section of the right hemisphere was made on a line with the course of the bullet, and from the *tunnel* a number of speculæ of bone were removed. The brain substance around was very much softened, and immediately within the dura mater had some of the characters of cerebral abscess, but without the presence of any lining membrane. From this part of course the brain which constantly protruded was supplied. As to the course of the bullet, it traversed the posterior part of the floor of the anterior cornu of the right lateral ventricle, ploughed up a small portion of the corpus striatum passed beneath the septum lucidum, (as a more extended dissection showed), crossed the floor of the left lateral ventricle, wounded a like portion of that striated body, and was found lodged in a space of considerable size about two lines from the periphery of the hemisphere, being evidently spent before it could reach the bone, which it would have struck at a point almost precisely opposite its opening of entrance. The bullet was quite flattened or rather presented a watch glass appearance having slightly concavo-convex surfaces. The other organs were not examined.

It is subject for thought how such perfect mental power, as was presented during several successive days after the accident, could co-exist with so fearful a lesion.

Proceedings of Societies.

CANADIAN MEDICAL ASSOCIATION,

Sixth Annual Meeting, held at St. John, N. B., 6th
and 7th August, 1873.

The Association met at 10 o'clock, A. M., at the Odd Fellows' Hall. The President J. A. Grant, M. D., M. P. of Ottawa, occupied the chair. In the absence of Dr. Peltier of Montreal, the Secretary of the Association, A. H. David, M. D., was requested to perform that duty. A large number of Medical Gentlemen, principally from St. John, N. B., and the Maritime Provinces, were proposed and elected to membership. After the meeting was fully organized the following gentlemen were in attendance :

Jos. Côté, St. Vallier ; J. A. Grant, Ottawa ; Chs. C. Hamilton, Cornwallis, N. S. ; D. McN. Parker, Halifax, N. S. ; J. F. Black, Halifax ; W. S. Harding, St. John ; S. Z. Earle, St. John ; W. W. Wickwire, Halifax ; Jas. T. Steeves, St. John ; S. T. Gove, St. Andrews ; T. J. O. Earle, St. John ; L. B. Botsford, St. John ; W. H. Hingston, Montreal ; A. H. David, Montreal ; L. G. Turgeon, Montreal ; Robt. Thomson, St. Stephen ; Paul R. Moor, Hopewell ; Robt. Black, Wickham, Q. C. ; W. Bayard, St. John ; L. McLaren, St. John ; Geo. E. S. Keator, St. John ; F. W. Macpherson, Oromocto ; J. H. Wilson, Springfield, K. C. ; R. J. Lemont, Hampton ; F. G. Jordan, St. John ; John Waddell, St. John ; E. S. Blan-

chard, St. John ; E. A. Vail, Sussex Vale ; P. Robertson Inches, St. John ; Dr. Smith, Portland ; J. M. C. Fiske, St. John ; J. U. Burnett, Sussex ; James Christie, St. John ; John Berryman, St. John ; Boyle Travers, St. John ; J. A. Gregory, Fredericton ; G. J. Harding, St. John ; Edwin Bayard, St. John ; James D. Simpson, Fredericton Junction ; A. B. Atherton, Fredericton ; Benj. Coburn, Bright, N. B. ; Thomas Walker, St. John ; J. W. Daniel, St. John ; J. W. Sheffield, St. John ; L. G. De-veber, St. John ; H. E. Boirsy, Memramcook ; Wm. J. G. Dawson, Newcastle, Miramichi ; Edwin Farrel, Halifax ; E. Robillard, Montreal ; M. C. Macdonald, Narrows, Q. C., N. B.

The President then delivered his address, this will be found in our original department. In the course of the afternoon, Dr. W. H. Hingston of Montreal, read his address on Surgery, taking for his subject the History of Surgery in America from the earliest periods down to the present time. This address was critically reviewed by several gentlemen present, and occupied the balance of the day and evening.

Thursday, August 7th.—The Association assembled this morning at 9 o'clock, the President, Dr. Grant, in the chair, and Dr. David acting as Secretary. The report of the nominating committee was read by the chairman, Dr. Hamilton, and was adopted without dissent, it is as follows :

For President—Dr. Marsden, Quebec.

For Vice-President for Ontario—Dr. H. H. Wright, Toronto.

For Vice-President for Quebec—Dr. Hingston, Montreal.

For Vice-President for Nova Scotia—Dr. Jennings, Halifax.

For Vice-President for New Brunswick—Dr. S. Z Earle, St. John.

For Gen. Secretary of Association—Dr. David, Montreal.

For Gen. Treasurer of Association—Dr. Robillard, Montreal.

For Secretary (correspond.) for Ontario—Dr. Fulton.

For Sec. (correspond.) for Quebec—Dr. A. J. Belleau.

For Sec. (correspond.) for Nova Scotia—Dr. J. F. Black.

For Secretary (correspond.) for New Brunswick—Dr. G. E. S. Keator.

The following committees were appointed on subjects named :—

Prize Essay Committee : Drs. David, Howard, Fenwick, Rottot and Pelletier.

Medical Education : Drs. Grant, Howard, Wm. Bayard and Parker.

Medical Literature : Drs. Black, Fenwick, Dagenais, Farne, Bethune, McIntosh, Fulton, Oldwright, Wickwire, Russell and Hamilton.

Necrology : Drs. Campbell, Canniff, Harding and DeWolf.

Publication : Drs. David, Robillard, Campbell, Trenholm, Dagenais, Hingston, and Pelletier.

Auditing Committee : Drs. Fenwick, Pelletier and Turgeon.

The President, Dr. Grant, remarked that he regretted much that no essay had been sent in for competition for the gold medal offered by himself and Dr. Worthington of Sherbrooke. He would continue the offer for another year with an earnest hope that several essays would be forthcoming at the next annual gathering, subject Zymotic diseases and their prevalence in Canada.

The following gentlemen are requested to prepare papers on the following subjects for the next meeting of the Association: R. P. Howard of Montreal, on Medicine; E. Farrell of Halifax, and Fenwick of Montreal, on Surgery; E. H. Trenholm of Montreal, on Midwifery; A. P. Reed of Halifax, and Brosseau of Montreal, on

Hygiene ; Desjardins of Montreal, and Rosebragh of Toronto, on Ophthalmology ; Berryman of Toronto, and G. A. Hamilton of St. John, on New Remedies ; W. H. Hingston of Montreal, on Mercury.

Dr. L. B. Botsford, St. John, N. B., read a paper on Hygiene and an interesting discussion ensued, the subject of the want of a proper system of registration of births, marriages and deaths was fully entered upon by Dr. Keator of St. John, Dr. Botsford and others. On motion of Dr. Botsford seconded by Dr. Travers, a committee was appointed to consist of Drs. Grant, Tupper, Hamilton, Rottot and the President, to bring the subject of vital statistics prominently before the Dominion Legislature with a view of definite action thereon.

A discussion then took place upon the report of the committee appointed to prepare amendments to the constitution and by-laws, which were allowed to remain as they were.

Dr. Wm. Bayard brought before the Association a little girl who had been afflicted with a very peculiar, interesting and rare injury, namely, the fracture and ultimate elimination of the odontoid process of the axis or second vertebræ. The Dr. made some interesting remarks upon the treatment of the case and upon the case itself, which was examined with much interest by the members present. The treatment of this formidable case was quite successful, and the little girl was in good health. This is one of only three cases of the injury known to have occurred.

On motion it was decided to hold the next meeting of the Association at Niagara, on the first Wednesday in August, 1874.

Votes of thanks were passed to the retiring officers, to the members of the profession in New Brunswick for their kindness and courtesy, to the Odd Fellows for the use of their hall, and to the railway and steamboat managers for reduction of fares. The convention then adjourned.

Reviews and Notices of Books.

Insanity in its relations to Crime; a text and a commentary.

By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the mind and nervous system, &c. 8vo. pp. 77. New York: D. Appleton & Co., 549, 551, Broadway, 1873.

We learn from the preface that a part of this essay first appeared in *Putnam's Magazine* for September, 1870. The greater portion is, however, now for the first time published. The author commences by giving the history of three cases of insanity in illustration of the medico-legal relations of that mental state to the commission of crime.

These are taken from the jurisprudence of foreign countries; intentionally so, "in order that entire absence of disturbing factors might be secured." The first case given is that of Leger, taken from the '*Causes Célèbres*,' which occurred in 1824. The man carried off a little girl, of about twelve years, ravished her and afterwards cut her body up and ate a portion of her heart and drank her blood. This wretched being although evidently insane was convicted of murder and speedily executed. The opinion that Leger was insane, was advanced by Mr. Gorget, and after the execution an autopsy of his body was made by Esquirol and Gall, and evidence of the existence of brain disease was discovered. It is hardly fair to advance this case in support of the views put forth by our author because it occurred at a time when the death penalty was frequently inflicted for much lighter offences than that of murder. *Tempora mutantur et nos mutamur in illis.* Had Leger lived in our day he would have found those ready to deliver him from the hand of the executioner, as in verity it seems to us to have been a judicial murder.

The next case is that of "Jobard" who was apparently religiously insane. He conceived that he had committed crimes against High Heaven and that while he lived he could not resist the commission of sin. The unfortunate wretch thought of suicide, but reasoned that he would be unable to repent the crime of self-destruction and that he would as a necessity be damned to all eternity. He next decided to forfeit his life to the State as he would thus get rid of his encumbrance and also time for repentance before his execution. This intention he carried out by stabbing to the heart a young woman, a perfect stranger to him, during the performance of a piece at the theatre of the Celestines in Lyons. There could be no question of the man's insanity, the jury returned a verdict of guilty as to the homicide with premeditation, but with extenuating circumstances, and he was condemned to imprisonment for life at hard labour. This occurred in 1851.

The third case selected is that of Jules —, a young man of nineteen years who murdered his step-mother, whom he had regarded with increasing aversion for several years. At the trial, Calmeil, Tardieu and Devergie testified in favor of the insanity of the prisoner and he was acquitted and set at liberty. It appeared that several members of his family both on his father and mother's side had been insane. This unfortunate young man removed to Brussels where he lived in great retirement, and five years after the act above narrated, he returned to Bordeaux, sought out the tomb of his victim, wrote some sentences in his memorandum-book and then blew out his brains.

In relating this case M. Devergie remarked that it was a matter of great surprise to him and others, that the young man had not been confined in a lunatic asylum for that all the experts had insisted on the necessity of removing the young man from society, as at any

moment he might commit another criminal act of insanity.

The author in the second part of his treatise gives us a commentary on the law of crime and seems to argue in favor of inflicting the death penalty in certain cases of murder perpetrated by the insane. In speaking of insane delusions connected with matters of religious belief he remarks: "They are not concerned with matters of fact and should never, therefore, be held to acquit of responsibility for crime." Under this head he mentions the case of Charles Anderson who deliberately took the life of James Marchin, one of the crew of the ship *Raby Castle*, on her homeward voyage from Penang. Marchin was a mulatto, but Anderson was under the delusion that he was a Russian Finn. From a strange superstition that the presence on ship-board of a Russian Finn would lead to the loss of the ship and crew, Anderson determined to kill the Finn, which he ultimately accomplished. And the author remarks further on in reference to this case "Delusions such as his do not justify homicide, and, were a few like him severely punished there would be less superstition and fewer delusions. While death is the penalty for murder, such lunatics as Anderson should be made to suffer it." This we think a very dangerous doctrine to advance; and although without doubt an insane murderer should be secured from further chance of putting in practice his insane delusions, a more merciful method of punishment can be instituted than that of inflicting the death penalty.

Again the author states that "some of the insane are such monsters of depravity that they should be slain upon the same principle that we slay wild and ferocious beasts.

To sum up the author considers that the insane if convicted of crime should be punished either by sequestration, fine and imprisonment, with labour, and in some

instances even with death. To the former of these propositions we agree, but we cannot believe that in any community the safety of society demands the infliction of the death penalty for murder, when the proof of the existence of an insane impulse is beyond question. The plea of insanity in excuse for crime is exceedingly difficult to establish. In England the criminal is usually left for execution, but when insanity is established the prerogative of the Crown is exercised and the sentence commuted to imprisonment for life. Dr. Hammond has suggested the establishment of penitentiaries for the insane criminal; this would become a necessity if crimes of this nature were common, although it is on high authority probable, that nine-tenths of the crimes perpetrated, proceed from a diseased or disordered state of the mental faculties operating on an individual lacking a guiding principle of virtuous action.

Report of Columbia Hospital for Women and Lying-in Asylum, Washington, D. C. By J. HARRY THOMPSON, A.M., M.D., Surgeon-in-Chief; with an Appendix, 4to, pp. 430. Washington: Government Printing Office, 1873.

We lately received for review, the report of the Surgeon-in-chief, Dr. J. Harry Thompson, of the "Columbia Hospital for Women, and Lying-in Asylum," Washington, D.C. The report is a thick quarto volume of 430 pages, with numerous illustrations and consists of an account, by Dr. Thompson, of the various operations which have been performed in the Hospital from March 1866 to June 1872, with an appendix containing reports from each of the three departments of the Dispensary connected with the Hospital: "Diseases of Women," "Diseases of Children," and "Diseases of the Eye and Ear." The report is excellently printed at the Gov-

ernment Printing Office, Washington, and it reflects great credit upon the industry and care of Dr. Thompson, and the liberality of the United States Government.

Columbia Hospital obtained its charter in June, 1866, and in the same year, Congress appropriated \$10,000 to its support, and the appropriation has gone on increasing yearly, with the demands of the Hospital. Founded at first, with a view to afford medical and surgical assistance to numbers of those women, who were attracted to the Capital during the war, in search of friends and relatives, and many of whom were prostrated by sickness and totally without means, it now holds forth its advantages to women from all parts of the Union. Since the opening of the Hospital in March, 1866, to June 1872, the total number of admissions has been 11,455, of whom the large proportion of 9,457 has been discharged "cured."

Dr. Thompson's report is a summary of the principal operations from March 1866 to June 1872, and is an interesting and valuable record. In the first section of his report he gives the details of 34 cases in which he operated for rupture of the perinæum. He performs the operation in much the same manner as that advocated by Mr. Baker Brown, but he does not divide the sphincter as recommended by that gentleman; he prefers instead, to paralyze the muscle, after the plan of Dr. Van Buren, by introducing the thumbs into the anus, seizing the nates on either side, and making gradual traction until each thumb touches the tuber ischii. He claims that permanent loss of power never results from this mode of treatment, as it does sometimes from division of the sphincter. Instead of bougies, he uses hard rubber tubes, the size of an ordinary catheter, and perforated at intervals of a quarter of an inch, and in lieu of waxed thread he uses silver wire. He also secures a daily passage from the bowels, washes out the vagina with a weak

solution of carbolic acid, and draws off the urine every six hours.

In the cure of this most distressing condition, Dr. Thompson has had entire success as his carefully reported cases show, and many were instances of rupture of several years standing, and variously complicated. The operations for vesico-vaginal, and recto-vaginal fistulæ, and those for the relief of vaginal recto cele and vaginal cystocele, seem to have succeeded well.

In the section devoted to diseases and displacements of the uterus, we have clinical notes, which will repay perusal, on many cases under Dr. Thompson's care. These include cases of Prolapsus uteri, uterine tumours of various kinds, subinvolution of the uterus, and carcinoma of the uterus, to which is added an account of eight cases of cancer of the breast. Preceding the details of the cases of cancer, Dr. Thompson gives a synopsis of the history of the disease from Hippocrates and Paulus Ægineta, to Virchow, Billroth and Rindfleisch.

The *résumé*, is, without doubt interesting and instructive, and although it seems to us somewhat out of place in an official report like the one before us, yet it leads up, naturally, to the author's conclusions on the nature of cancer, which we give in his own words.

"*First.*—That cancer is not constitutional in its origin, but the result of a slowly transpiring, interstitial inflammation, dependent upon local irritation.

"*Secondly.*—That there is no specific cancer-cell, the cells found in the connective tissue stroma being altered epithelial cells, or the white corpuscles of the blood, their different appearances in different forms of cancer, being dependent upon the stage of the disease, and the organ in which it is developed.

"*Thirdly.*—That the probability of secondary cancer occurring after the ablation of a primary tumour depends upon the richness of the part in lymphatics, and the stage of the disease."

In consequence of this view regarding the nature of cancer, Dr. Thompson advises amputation of the cervix, as a "curative and prophylactic measure" in chronic cervical metritis, when "all other means of resolving the inflammation and induration have failed."

He then proceeds to give the notes of eight cases of carcinoma uteri, treated locally with bromine as a caustic and injections of bromo-chloralum as an antiseptic, morphine or conium being given internally to allay pain. One of these cases was treated by amputation of the cervix, as the upper part of the cervix and the body of the uterus seemed healthy. The operation was performed in July, 1867, and in February, 1872, the patient was delivered of a child at full term, and there was no evidence of a return of the disease. With a short account of various other operations Dr. Thompson's report concludes.

The appendix contains reports from the Dispensary connected with the Hospital, and will well repay perusal.

In conclusion we must express the pleasure which we have felt in reading the report, and congratulate Dr. Thompson upon the able manner in which he has fulfilled his task, and upon the efficient aid which the Hospital offers to suffering women.

We commend this report to our readers, or rather to such of them as are able to obtain a copy of it, as it is a Government document, and one not intended for public circulation.

BOOKS RECEIVED FOR REVIEW.

The Medical and Surgical History of the War of the Rebellion, 1861-65. Prepared in accordance with Acts of Congress under the direction of Surgeon General Joseph K. Barnes, United States Army. Medical Vol., part first, imp. quarto, pp. 1077. Surgical Vol., part first, imp. 4to, pp. 664. Washington, Government Printing Office, 1870.

The Cerebral Convulsions of man represented according to original observations, especially upon their development in the fetus. Intended for the use of Physicians, by Alexander Ecker, Professor of Anatomy and comparative Anatomy in the University of Freiburg Baden. Translated by Robert T. Edes, M.D., 8-vo. pp. 87. New York, D. Appleton & Co., 549 and 551 Broadway, 1873.

Experimental Researches on the causes and nature of Catarrhus Æstivus, Hay-Fever or Hay-Asthma. By Charles H. Blackley, M.R.C.S.Eng., 8-vo. pp. 202, London, Bailliere, Tindall & Cox, King William Street Strand, 1873.

Clinical Electro-Therapeutics, Medical and Surgical. A Hand-Book for Physicians in the treatment of nervous and other diseases. By Allan McLane Hamilton, M.D., Physician in charge of the New York State Hospital, for diseases of the nervous system, &c., &c. With numerous illustrations, 8-vo. pp. 184. New York, D. Appleton & Co., 549 and 551, Broadway, 1873.

Contributions to Practical Surgery. By George W. Norris, M.D., late Surgeon to the Pennsylvania Hospital, Vice-President of the College of Physicians of Philadelphia, &c., 8vo. pp. 318, Philadelphia, Lindsay & Blackiston, 1873.

Chemistry: General, Medical, and Pharmaceutical including the Chemistry of the U.S. Pharmacopœia. A Manual on the General Principles of the Science and their application to Medicine and Pharmacy. By John Attfield, Ph. D., F.C.S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, &c., &c. Fifth Edition, revised from the last English edition, by the author, 8-vo. pp. 606, Philadelphia, Henry C. Lea, 1873.

CANADA.

Medical and Surgical Journal.

MONTREAL, SEPTEMBER, 1873.

THE CANADA MEDICAL AND SURGICAL JOURNAL.

It will be observed that we have associated with us three gentlemen who have in the past, given very material aid in the work of editing this journal. By this arrangement we trust to issue the journal with greater punctuality, and make it more worthy of the support of the profession.

In starting this enterprise we were fully alive to the fact that we were incurring grave responsibility. Medical journalism has never been a remunerative undertaking in Canada. Several periodicals have been published from time to time and all have been relinquished by their promoters for lack of support. The profession appears to regard with singular apathy an undertaking of this kind. Some believe that untold wealth pours into the coffers of the proprietors ; others look upon it as a means used by the few to indulge in a species of self-gratulation.

We may observe that the success and advancement of the science of Medicine and Surgery can alone be promoted by a free interchange of ideas. This will be found to be best secured by the publication of those ideas. We can all see the advantage to the profession in Great Britain, by the free publication of ideas, suggestions and methods of practice in the weekly and other medical papers. These periodicals are read with avidity by the

profession, because the character of the papers published is such, that few men can afford to pass through life without an acquaintance with the prevailing opinions of the times. Are we then in Canada without opinions? Has no man amongst us, matured his opinions and beliefs on the truths of observation? And if such be the case, is it not a duty to give for the benefit of all, such results of observation. Space will not permit us to say much more on this subject; suffice it to remark that we expect to deserve the support of our professional brethren by independence of opinion on medico-political matters; and on scientific points we will allow the profession to take care of itself, feeling at the same time certain that in this country, in time, it will wake up from its present state of lethargy and assume its proper position in the ranks of the educated.

POISON-LABELS.

We took the opportunity on a recent occasion to express our surprise at the absence of all notice upon the part of the coroner and his jury of the fact of the discovery of several large vials of the most deadly poisons upon the person of a man who was found dying in one of our streets. That this exhibits gross neglect on the part of that legal functionary none can deny; on that aspect of the case, however, we have already said our say. But here is another point equally deserving of attention and to which we but barely alluded in our previous article. Why were these large quantities of the most virulent poisons known allowed to be dispensed without so much as having the word *poison* written upon the label? Fancy two ounces of Flemings' concentrated Tincture of aconite being handed out to an ignorant man, one notoriously intemperate and addicted to quacking his neighbors, without any mark whatsoever on the bottle to warn

against the deadly nature of its contents! Is this right? We think not; still there is no law in the country to prevent its being done, and we know that no druggist could be in any way punished for neglecting to observe this salutary precaution. Although there is an old act still in force forbidding the sale of poisons without an authenticated order of a physician, or priest, yet there is no law or regulation whatsoever on the subject of compulsory attention to the proper labelling of bottles and parcels containing poisonous drugs. How many cases of so-called accidental poisoning have been known to have taken place solely through neglect of this precaution? And how many more have doubtless occurred about which nothing was ever heard? A short time ago a patient of our own was by the merest accident prevented from taking a spoonful of aconite liniment instead of his iodide of potassium mixture, solely owing to the absence of any distinguishing mark upon the vial containing the former.

It is high time that the attention of the profession in Canada should be directed to this matter. In England the most stringent regulations are on the statute books concerning the sale and mode of dispensing poisonous drugs, to the great importance of which the British public are so fully alive. This is evinced by the unhesitating manner in which verdicts and presentments of coroner's and other juries are made when it is ascertained that due diligence and caution have not been used. But, somehow, we in Canada seem never to have appreciated the magnitude of the possible results which might emanate from such remissness; and furthermore we are satisfied that there are many amongst the fraternity of druggists, even of those in best standing in our own city, who seem to be utterly unconscious of the grave responsibility resting upon them while dispensing poisons. They ought to know and feel that while thus engaged they are

morally bound to use every care to prevent, to the utmost of their power, the possibility of mistake occurring in their use; but on the contrary some we have found—exceptions we hope and believe they are—possessed of a degree of obtuseness and culpable nonchalance positively surprising. In illustration of this latter statement we may quote a circumstance recently related to us by a medical friend. He had occasion to prescribe a strong solution of atropia for a case of ophthalmia. Now, although he had taken the precaution of writing the word “poison” in his prescription with the directions, the bottle was sent without any mark but the common label. Thinking it an oversight on the part of the druggist it was sent back with the request that a poison label might be affixed. To our friend’s surprise the messenger on returning stated that the druggist was much annoyed—pooh poohed the idea—and said that “no person was such a fool as to take eyedrops.” Now, when we find that in our city druggists of good standing ridicule the idea of affixing a poison label to such a preparation as the solution of atropia, even after having been *ordered* to do so by a physician’s prescription, then we think something should be done.

This matter certainly falls more immediately under the province of the Pharmaceutical College, but is of great importance to every medical practitioner in the country. We have been given to understand that a new bill concerning the sale of poisons is to be introduced before the Quebec Legislature at its next session. If so we would recommend that provision be made in it for *properly labelling* all poisonous drugs when dispensed and would especially call upon the medical members of the House to see that such becomes law.

MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

We give in another column a synopsis of the report of the annual meeting of the Canadian Medical Association which took place at the city of St. John, N. B., on the 6th and 7th August last. The proceedings were soon over as there was not a large amount of business to be transacted. Several interesting papers on various subjects were read which elicited lively discussion.

After the close of the second day's proceedings, the members of the Association at St. John, entertained their visitors most handsomely at a dinner given in the spacious apartments of the Provincial Lunatic Asylum. This social gathering was not exclusively medical, it was largely attended by the *elite* of St. John, His Honour the Lieutenant Governor gracing the occasion with his presence and presiding as chairman.

After the guests had fully partaken of the good things provided, and the customary loyal toasts had been disposed of, the real business of this social gathering commenced and was kept up with unusual spirit. We were told by a gentleman present that he had seldom enjoyed himself to the same extent as on that occasion. The off-hand speeches were very racy, and the witticisms ready and to the point. We are not aware if the title of Blue Nose applies to the New Brunswicker as well as to the Haligonian, but one would fancy that there must be something unusually bracing in the air of our sister Provinces; full of wit, repartee and as we would term it in this province *bonne amitié*, their visitors will not likely forget the occasion of the meeting of the sixth Annual Convention of the Canadian Medical Association held in the city of St. John, N. B., and the many pleasant and instructive hours passed with their *confrères*.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION FOR THE DOMINION.

We were rather gratified to observe that the Canadian Medical Association at its last meeting at St. John, N.B., did not take up or discuss a Medical Bill. We think that the Canadian Medical Association is not the place for such a discussion. If as a profession we feel that reform is necessary it can alone be obtained by united action. As a profession we should endeavour to unite, and such petty differences as those of creed, nationality or territorial position should not be permitted to divide our ranks.

We cannot see why we should not go to the House of Commons and obtain from it a bill or act to establish a General Council of Medical Education and Registration for the Dominion.

In this number of the journal we publish a paper from Dr. Botsford in which that gentleman shows the practical bearing of a proper system of registration. We have before alluded to the subject of a general law, and the necessity of carrying out a uniform system of registration. For, if we possessed a council such as they have in Great Britain, then indeed might some good arise. It is alone by pointing out and laying bare the fact, of a large mortality, from preventable disease, that communities will engage earnestly in the work of prevention, or at least of ascertaining the actual causes of the high death rate, with a view to their removal.

We suppose in introducing such an act the Local Legislatures would have to yield their consent, but to this we do not think any exception would be taken. We will refer to this subject again at an early date.