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# THE DOMINION MEDICAL JOURNAL.

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## Original Communications.

### RESEARCHES ON THE SOUNDS OF THE HEART.

By GEORGE PATON, M.D.

Licentiate R. Coll. Surgeons, Edin., Eic. Soc. Apoth.  
Lond., Lic. Med. Board, M.D., Univ. Jena.

June 24—Denuded the heart of a large turtle, and examined the action and sounds. Pulsations 36 per minute.

When the ventricle contracted, a dull, prolonged sound, like the first sound of the heart, was heard, through the medium of the stethoscope, placed over the heart, carefully avoiding pressure on the part. This sound was heard just as the ventricle commenced to contract, and propel the blood into the aorta, and it was heard loudest a little above the origin of the aorta, and seemed to terminate there with a sort of small knock, the aorta being rendered more curved and distended where the sound appeared to terminate. As the contraction of the ventricle commenced, the parietes immediately opposite the origin of the aorta became so firm and tense that the aorta appeared to be prolonged deeper into the ventricle, and the ventricle contracted with a strong impulse, pushing as it were the blood into and along the aorta with force. Whilst this contractile energy was exerted, the first sound of the heart was heard, and the parietes of the ventricle became instantly tense, firm and elastic, and this condition increases as the ventricle contracts; but the action was strongest in that part of the ventricle opposite the origin of the aorta, the parietes there being rendered very firm and tense—expanding with force and throwing out the fingers that pressed them, as the fibres rapidly contracted and propelled the blood along the aorta with an impetus. The sound seemed to commence in the ventricle and to terminate at that part of the aorta a little above its origin, where it suddenly, during the contraction of the ventricle, becomes more curved, hard and tense. Immediately after the first sound terminated, a second sound was heard. It was sharper and shorter than the first sound, and seemed to be seated deeper. It occurred during the *dilatation* of the ventricle,

and as the auricles contracted, and projected their blood into its cavity. This was clearly ascertained by listening to the sound through the medium of the stethoscope, and counting 1, 2, 3, 4, 5, 6, etc., as it was heard, whilst a gentleman at the same time carefully observed the action of the auricles, and it was clearly ascertained that the auricles contracted as the second sound was heard. These sounds could be heard during many hours through the medium of the stethoscope; and the first sound could be heard by applying the naked ear over the heart, but both the first and second sounds appeared more distinct when heard through the instrument.

The auricles contracted with great vigor, shooting, as it were, the blood into the foramen of the ventricle, and they commenced to contract immediately after the first sound had terminated, and the pulsation was observed in the aorta. There was no pause in the dilatation of the ventricle—the movement was continuous. The blood from the auricles appeared to open up the ventricle, for its parietes heaved up and swelled out at the auriculo-ventricular foramen, when the blood was entering it, and on being dilated or the parietes distended, the ventricle immediately contracted in the manner we have stated. There were just two movements of the ventricle—that of dilatation and contraction following each other in rapid succession.

July 1st—took a large turtle, and removed a portion of the sternum, or bone that covers the thorax and abdomen, leaving the thoracic and abdominal muscles uninjured, so that they continued to cover the heart and prevent pressure on the part, when we applied the stethoscope and listened to the sounds. Pulsations 34 to 36 per minute.

The first sound of the heart was distinctly heard through the medium of the stethoscope. It was a dull, prolonged sound, increasing in intensity till it terminated by a sort of small knock, as if it were fully brought out at that point. It was louder sometimes than at others, and could be distinctly heard whilst the animal remained quiet, and we attentively listened to the action of the heart. It occurred during the contraction of the ventricle, and was heard distinctly through the thoracic muscles, when the stethoscope was placed over the cardiac region. We have counted as many as 30 and 40 pulsations without interruption or removing the instrument. The sound could also be heard by the

naked ear applied over the region of the heart. The second sound could be distinctly recognized through the medium of the stethoscope. It immediately succeeded the first sound, but was shorter, more acute and sharper, and appeared to be deeper seated. On dividing the thoracic muscles and opening the pericardium, we distinctly recognized this (second) sound to be produced by the contraction of the auricles projecting their blood into the ventricle. It succeeded the first sound, commencing immediately after its termination, and consisted of a short whiff or sharp sound, and then silence intervened between it and the commencement of the first sound. When the action became weaker, both sounds seemed to partake of a slight murmur, as is observed in cases of anæmia, and then the second sound appeared to be rather longer—both were distinctly heard.

We have examined this subject by a few carefully conducted experiments on the turtle during the highest temperature of the season, as the animal at this period assumes the physiological condition of warm-blooded animals; and the sounds produced by the action of the heart must depend on exactly the same principle as in warm-blooded animals. We performed a number of experiments on large warm-blooded animals to determine the manner in which the ventricle contracts and the cause of the sounds; but as regards the latter, we found it more difficult to arrive at sufficiently satisfactory results. In the turtle the effects of the operation are but slight, and after the heart has been denuded, its action is maintained with apparently the same power as during health. The animal will survive for several days, and move about and exert itself with great energy.

July 4—The heart of a turtle having been denuded, we applied the stethoscope, and distinctly heard both sounds. Pulsations 40 per minute. Temperature of day 90° Fahr.

The action of the heart was displayed in a most beautiful and interesting manner; the ventricle contracting and projecting the blood into the aorta, produced a pulsation in its walls a little above its origin, where the first sound of the heart is clearly heard and appears to terminate, being there most distinct; and immediately after this sound ceases, the auricles contract, and a sharp short sound is heard through the medium of the stethoscope, as the blood is projected by them into the ventricle. Sometimes this second sound has a little bellows murmur with it, and then we think we almost hear the blood enter the cavity of the ventricle. In observing this action of the heart with the eye, the cycle of movements appears to commence with the contraction of the auricles, projecting their blood

into the ventricle, and then the ventricle contracting and propelling the blood into the aorta, producing the systole, terminates the cycle. But in listening with the ear, applied to the stethoscope, the cycle of sounds appears to commence with the contraction of the ventricle, as that is the loudest and most prolonged sound; and the second sound appears to succeed the first sound, as the second is the shortest and sharpest sound, and in unison with this, the auricles commence to contract immediately after the termination of the contraction of the ventricle, as the action of the heart is now quick and rapid, and do not immediately precede the contraction of the ventricle, as is the case when the action of the heart is slow, and an interval occurs during the dilatation of the ventricle.

In a turtle, the action of whose heart amounted to 45 and 50 pulsations per minute, the highest we have met with in this class of animals. Temperature of day 90° Fahr.

The first sound was dull and prolonged—appeared to commence in the ventricle, and to terminate a little above the origin of the aorta, the sound being there most distinctly heard and fully brought out. It was quickly performed, and more rapid than formerly—more like the sound of the human heart. The second sound commenced instantly after the first sound terminated. It was a short sound, and appeared more distant—not so near the ear as the first sound, because in the turtle the auricles are seated deeper than the arch of the aorta. But it was heard instantly to succeed the first sound. The first sound took place during the contraction of the ventricle, and distension and pulsation of the origin or arch of the aorta, and the second sound corresponded with the contraction of the auricles and dilatation of the ventricle.

On observing the action with the eye, the auricles appeared to contract instantly after the pulsation took place in the aorta—point of termination of the first sound, the movement following the other so rapidly, that it was difficult to estimate the short interval. But the auricles appear to commence, at an appreciable instant, sooner to contract, after the pulsation in the aorta, when the action of the heart is 45-50 per minute, than when it is at 30 pulsations per minute. It is difficult to estimate by the ear, the precise interval that intervenes between the first and second sounds of the heart. Muller, we believe, estimates it at 1-5th of a whole beat. According to our observations, this appreciable interval seems to diminish, as the action of the heart increases, to a certain extent or point. Laennec considers that no interval occurs between the commencement of the second sound and the termination of the first sound. Dr. Williams

thinks, that during the ordinary rate of speed of the human heart, an appreciable interval occurs between the two sounds—between the termination of the first sound and the commencement of the second sound in the human heart, and it appears to us that the second sound follows the first more immediately at 40 pulsations per minute than at 30, and at 50 pulsations than at 40 per minute.

If, after having removed a portion of the sternum, we carefully observe the thoracic parietes during the action of the heart, we see clearly that they are gently raised or slightly heaved up during the contraction of the ventricle, so that we can distinctly follow the movement of the passage of the blood from the ventricle to that part of the aorta a little above its origin, where the first sound is heard to terminate, and we clearly perceive that it is one distinct and continuous movement. During this period the first sound is heard, and the second sound, which immediately follows, occurs as the thoracic parietes fall, a short silence ensuing, and then the thoracic parietes are raised again by the contraction of the ventricle.

From these statements, it appears that the first sound is heard during the contraction of the ventricles, and the distension and pulsation of the arch of the aorta, or the arterial systole near the heart.

In some cases, when the action of the heart became weaker, a slight bruit attended both sounds, and then the tone of the first sound was not so firm, and the second was more prolonged, putting it beyond all doubt that the second sound was connected with the auricles projecting their blood into the ventricle. We have also, in some cases during the summer, heard the second sound double when the contraction of the auricles was not exactly synchronous.

No portion of the first sound could be connected with the auriculo-ventricular valves, because a membranous expansion very small, of the internal parietes of the ventricle is extended over the orifices and covers that part completely during the contraction and expansion of the walls of the ventricle, and it is so small and so situated that no sound can be produced at the part during the ventricular contraction.

The second sound could not depend on the blood in the aorta falling back against the semilunar valves during the dilatation of the ventricle, or as it is stated, by the diastole of the ventricle drawing part of the blood back against the valves, for the valves are too small, and the backward force exerted too weak to produce the sound that is heard. There are other two vessels that arise from the ventricle along with the aorta, which must diminish their respective areas. The vessel situated to the left side represents the

aorta, along which most blood passes during the contraction of the ventricle, and after the death of the animal, when we examined the semilunar valves situated at the origin of the aorta, they are so small that they seem totally incapable, by the falling back of the blood on them during the dilatation of the ventricle, to produce the second sound of the heart. Besides, if a sound is produced in the arch of the aorta, it must occur when the walls are distended and tense, and react on their contents in transmitting the blood forward. For it is a fact that the walls of the aorta become soft and compressible, in unison with the relaxation and dilatation of the ventricle. The moment the parietes of the ventricle relax, the walls of the aorta also become soft, and could not then cause the blood to recoil against the semilunar valves, so as to render them tense and produce the second sound that is heard during the action of the heart.

The first sound is produced by the contraction of the ventricle, the movement of the blood as it is propelled along the internal parietes of the ventricle into the aorta, and the distension and pulsation of the aorta at its origin; the sound terminating a little above that, where the aorta becomes more curved at the moment.

It commences with the contraction of the ventricle, and terminates in the aorta, a little above its origin.

The second sound is produced by the contraction of the auricles, and the movement of the blood as it is propelled by them into the ventricle during its dilatation.

It appears to follow the first sound as an immediate sequence, as it takes place so quickly after its completion. But it is the commencement of a new beat, and synchronous with the dilatation of the ventricle, and of course precedes the ventricular systole.

When the ventricle contracts, and propels a wave of blood into the aorta, it distends its walls and renders them more curved, hard, and tense, and the aorta instantly gives a pulsation and transmits the blood forward with increased velocity, and the pulsation of the aorta takes place whilst the ventricle is still contracted. At this moment the contractile or elastic power of the aorta is distinctly exerted, as can be proved by perforating the walls of the aorta with a needle, and allowing the blood to be expelled through the orifice. When the ventricle contracts and propels the blood into the aorta, the parietes are rendered firm and tense, and as the aorta gives a pulsation, a jet of blood is expelled through the orifice made by the needle. But when the contraction of the ventricle ceases, the walls of the aorta become soft and compressible, and the

blood ceases to be expelled through the orifice. Showing that it is during the contraction of the ventricle, that the parietes of the aorta assume a firm and tense condition and exert a rapid reaction on their contents. And if we carefully observe these movements whilst our fingers are gently placed against the sides of the ventricle and aorta, we perceive that this firm and tense condition of the aorta terminates as the contraction of the ventricle terminates and in unison with it. That the instant the dilatation of the ventricle commences or its walls relax the parietes of the aorta assume the same relaxed condition, becoming soft and compressible, which condition extends from the ventricle to the aorta. Hence during the dilatation of the ventricle, the blood in the aorta could not fall back against the semilunar valves with a force sufficient to produce the second sound of the heart.

Carpenter says, "The first sound is evidently synchronous with the impulse of the heart against the parietes of the chest, and also with the pulse as felt near the heart." And Dr. Wood\* states, "The first sound is heard during the contraction or systole of the ventricle, and is synchronous with the beating of the ventricle, and with the pulsation in the large arteries near the centre of circulation, but anticipates by a very minute, but still appreciable interval, the pulse at the wrist." Muller† also observes, "The pulse being dependent on the contraction of the ventricle, is in general synchronous with it." And Dr. Hope‡ states precisely the same fact, when he says, "Synchronous with the ventricular systole, are, the first sound of the heart, the impulse of the apex against the ribs, and in vessels near the heart, the pulse." For, if these be simultaneous, it is very evident, that the first sound is synchronous with the ventricular systole, the impulse of the apex against the ribs, and the pulse in arteries near the heart. And we have seen in our experiments, that when the ventricle contracts, and propels the blood into the aorta, it distends its walls and a pulsation is produced which terminates the first sound of the heart, synchronous with which the blood recoils against the semilunar valves as it is transmitted forwards with increased velocity.

In experiments on the aorta, it has been ascertained by Drs. Hope and Williams, and by the Dublin committee and others, that a sound is produced as the blood recoils against the semilunar valves; and that the sound disappeared or was converted into a hissing when one of the laminae of the valves was injured or hooked back. But this recoil of the blood against the semilunar valves

must have been produced by the systole of the aorta as the parietes reacted with force on their contents; and that was synchronous with the contraction of the ventricle, and the termination of the first sound. For physiologists are agreed that the first sound is synchronous with the contraction of the ventricle, and also with the systole of the arteries near the heart. And if the second sound of the heart be produced by the falling back of the blood in the aorta against the semilunar valves, during the dilatation of the ventricle, then, according to that view, the blood must fall back twice in succession or recoil against the semilunar valves and produce a sound, during what these physiologists consider one beat of the heart: first, during the systole; and, second, during the dilatation of the ventricle; for, according to Dr. Hope, the first part of the dilatation of the ventricle succeeds the ventricular systole, and the latter part precedes the next systole.

The whole question resolves itself into this, if the systole of the aorta and the arteries near the heart be synchronous with the contraction of the ventricle, then, the blood must recoil against the semilunar valves during the first sound of the heart, and constitute the termination of that sound; and if the second sound depends on the blood in the aorta falling back against the semilunar valves, during the dilatation of the ventricle, the blood must recoil twice against these valves in immediate succession, during every beat of the heart, and on each occasion produce a sound. But in the course of our experiments we have seen, that when the ventricle commences to dilate, its parietes become soft and relaxed, and this condition extends to the aorta, so that the blood could not then fall back with force, and produce the second sound of the heart.

When the ventricle contracts and propels the blood into the aorta, the aorta synchronously pulsates; and this pulsation is the distended parietes reacting on their contents, by which the blood recoils against the semilunar valves as it is transmitted onwards. Withdraw the cause of the distension of the aorta, by the ventricle relaxing and beginning to dilate, and the cause of the rapid reaction of the aorta on its contents ceases, "the parietes then straighten themselves and recover their former situation."—Muller, p. 199. Hence the blood cannot fall back with force against the semilunar valves, during the dilatation of the ventricle, so as to produce the second sound of the heart.

With regard to the time at which the auricles contract, it is generally believed that they contract immediately before the contraction of the ventricle, and not immediately after the termination of the preceding contraction. Harvey, Lancisi, Senac

\* Wood's Medicine, Philadelphia.

† Muller's Physiology.

‡ Hope on the Heart, p. 88.

and Haller considered that the contraction of the auricles immediately precedes that of the ventricles, and that the one movement passes rapidly into the other. Dr. Hope also maintained this doctrine, as the result of his experiments, and Professor Turner, arguing on this data, shewed that the second sound could not be produced by contraction of the auricles, as, according to these views, it ought immediately to precede and not to succeed the first sound of the heart. Now it is a fact, that when the action of the heart is slow, as in the frog, when it pulsates at the rate of 20 times a minute, the ventricle immediately dilates after its contraction, and blood passes into it from the distended auricles, filling it to a certain extent, and then the auricles contract and produce contraction in the ventricles, the one movement immediately preceding the other. The same thing occurs in warm-blooded animals, after the thorax has been opened, when the action of the heart becomes slow and irregular, or its movements are interfered with, as by preventing the action of any of its valves. In these cases we have observed, that after contraction, the ventricle immediately dilates to a certain extent, and blood passes into it from the distended auricles, and then the auricles contract and produce contraction of the ventricle. But we are by no means from this data to conclude, that this is the manner in which the action of the heart is maintained when it is quick and vigorous, beating, as in warm-blooded animals, at the rate of 70, 80 and 90 pulsations per minute. We have shewn in a previous paper,\* that as the action of the heart increases, the auricles contract sooner in point of time and of rhythm, till their contraction becomes synchronous with the diastole of the ventricle, so that they commence to contract immediately after the termination of the ventricular contraction. And let a physiologist examine the action of the heart when it has been quickly denuded in a warm-blooded animal, and he will see that the auricles contract immediately after the preceding contraction of the ventricles is finished—and that the action is maintained with surprising power, the one movement following the other in quick and regular succession.

In all these experiments on the turtle, the cycle of movements or beat of the heart commenced with the auricles contracting synchronously with the diastole of the ventricle; which being completed excited the ventricular systole that terminated the cycle; another beat commenced and ended in the same manner. But so rapidly did the contraction of the auricles succeed the termination of the preceding ventricular systole, that a movement could

often be observed in the auricles beginning to contract, and the contraction of the ventricle scarcely finished, so that only an appreciable interval occurred between the two movements or beats; the contraction of the auricles constituting the first part of the beat, and the contraction of the ventricle the second part or its termination, and then the auricles contracting as the preceding systole terminated. But, on listening to the sounds through the medium of the stethoscope, the order of the movements seemed to be reversed. The dull prolonged sound synchronous with the contraction of the ventricle appeared to be the first sound of the heart, and the short acute sound synchronous with the contraction of the auricle, appeared the second sound, and immediately to succeed the (first) sound only an appreciable interval intervening between the two sounds, which interval occurs between one beat of the heart and the commencement of another, and between the termination of the contraction of the ventricle and the commencement of the contraction of the auricles, that is, according to received phraseology, between the first and the second sounds of the heart, but in reality between the termination of the greater or second sound, and the commencement of the first or shorter sound. It is this interval that constitutes what is termed the first pause or period of silence between what is termed the first and second sounds of the heart. It depends on the auricles commencing immediately to contract after the contraction of the ventricle is finished, and when the action of the heart is vigorous that interval can scarcely be appreciated.

The short, sharp sound termed the second sound of the heart, but in reality the first, is synchronous with the contraction of the auricle and dilatation of the ventricle, and the moment of silence occurs as the ventricle attains the point of distension and commences to contract.

It is generally believed that no sound is produced by the vigorous contraction of the auricles. But Dr. Williams,\* "in some recent experiments with Mr. Clendinning, found the auricles of an ass produce a very distinct sound when they contracted vigorously, and independently of the ventricles. This was afterwards heard by all who were present. The same phenomenon has been also observed in some experiments recently performed in America." † Drs. Pinnock and Moore heard a sound produced by contraction of the auricles, and we have had ample evidence of this fact, in the course of our experiments this summer, on the action of the heart in the American turtle.

With regard to the aortic regurgitant murmur in

\* British Medical Journal, February, 1868.

\* Williams on the Chest.

† Wood's Medicine, Philadelphia

disease of the semilunar valves, always accompanying the second sound of the heart, it is very evident that this must be the case. It could not accompany the first sound, for the ventricle is still contracted at the mouth of the aorta when the aortic systole takes place. Consequently the blood could not then regurgitate into the ventricle. But when the pericardium relax, or dilatation commences, the blood regurgitates into the ventricle, and this is synchronous with the contraction of the auricles and the second sound of the heart. Dr. Hope says, "the regurgitant murmur is distinguished from the systolic murmur in the aortic orifice, by the weakness of the reflux current always imparting to it the softness of the bellows murmur, an inferior degree of loudness, and a lower key, like whispering the word *ave* during inspiration. It often becomes musical." But if the reflux current be weak, how could it produce by falling back against the semilunar valves, during the dilatation of the ventricle, the acute sharp second sound that is heard? and as regards regurgitant musical murmurs, that is no evidence of the strength of the backward current being able to produce the second sound, for Dr. Hope informs us (page 88), "that Dr. Latour succeeded in producing musical notes, by the flow of liquids through apertures in tubes." We must also state, that as the regurgitant murmur is synchronous with the second sound of the heart, it must mask that sound, and prevent it from being distinctly heard.

When we commenced these experiments on the turtle in the early part of the season, we could only recognise the first sound of the heart—a dull and prolonged sound, but fully and distinctly brought out; there was no second sound heard. But in a few days, as the temperature of the season advanced, the action of the heart increased, and the auricles began to contract, with greater vigour, and the second sound became audible—a sharp, short sound. We could then distinctly recognise both sounds of the heart lubb-dup, lubb-dup, and during the greatest part of summer, we were accustomed every few days, for several weeks, to examine the action and listen to the sounds of the heart, in several turtles, and nothing could be more satisfactory than the results. We could then, hear the sounds of the heart in these animals, as correctly as in man and warm-blooded animals.

TORONTO, ONT.

—In consideration of the numerous victims of homœopathic treatment, a decree of the Emperor of Russia prohibits the practice of homœopathy in the entire territories of Russian America.—*Union Médicale*.

## LIGATURE OF CAROTIDS IN CASE OF CANCER UNDER LOWER JAW.

By T. J. ORTON,

*A graduate of Toronto School of Medicine, and now Assistant Surgeon, Royal Artillery, India, in charge of Military Sanitarium, Landour, as described in a private letter to his brother, G. T. Orton, M.R.C.S., Eng., M.D. Univ. St. Andrews, Fergus, Ont.*

(Specially reported for Dominion Medical Journal.)

The Rev. Mr. F—, of the American Presbyterian Mission to India, came under my care, suffering from a malignant tumour under the left side of lower jaw; had previously consulted Assistant Surgeon Cutcliff, a man of the highest repute as a Surgeon in India, and Civil Surgeon of Mussoorie, and both he and I were of opinion that there was no possibility of removing this tumour, for it was rapidly and from day to day seizing fresh tissues, till both sides were almost equally affected, and all the salivary glands and root of the tongue were soon evidently one mass of solid stone, like scirrhus. Abscesses formed in the mouth, under the tongue, and externally all over the surface of the tumour; the patient's breathing and swallowing became difficult, and he suffered such agony and such constant distress, that he himself, his wife and friends, kept constantly beseeching me to think of something to relieve, if only temporarily, and at any risk, for they said that death was positively to be regarded as a blessing to him, in comparison to what they saw him suffer and knew he would have still to undergo, if the disease were left to run its course.

The removal of the diseased structures by the knife was utterly impossible, but I thought that if the external carotid on each side were tied, the tumour must at least remain stationary till the collateral circulation could establish itself, and this might give the patient time to go, as they all wished, back with his family to America, and die amongst friends who would care for the family he would leave behind him.

I was now continually importuned to carry out my suggestion, and though I saw all the difficulty of doing so, at last consented, making them give me a written statement that they one and all agreed to assume all the responsibility as to the result, and clear me of all blame, should my idea not prove correct, or should the operation fail in the execution.

The left side had the largest share of disease, and I had to cut down through the tumour to get near the point where the external is given off from the

common carotid, and the parts were so distorted and displaced, that I had to divide the anterior half of the sterno-mastoid muscle, it being rigid and fixedly drawn towards the median line, and so firmly so, that I could not otherwise get it from over the artery. I then found that the artery divided even higher up than usual, and that it was exceedingly doubtful if its coats were sound enough to bear a ligature, so I went down lower and tied the common carotid, where it was sound and free of all diseased parts.

The effect was wonderful! The wound healed all but where the ligature hung out, and at one other point to which pus had gravitated. The scirrhous tumour became soft and readily moveable, an immense quantity of cancer fluid drained away, and in ten days that side seemed absolutely free of disease.

The patient expressed himself relieved to a degree he had never anticipated, and both he and his friends begged of me to serve the other side the same.

I was very loth to attack the other side, for I knew that I could here only tie the external branch without stopping the supply to the brain; however, after telling them again all the risks, and again requiring of them a written absolution from all responsibility on my own part, I proceeded, and with much difficulty did succeed in getting the branch I wanted, and tying it, but not entirely to my own satisfaction; for I could not, for the life of me, get as high and clear above the bifurcation as I thought sure to keep the loose end of the clot that forms at the heart side in ligature of an artery clear of the current of blood in the main artery.

I did this operation on the twelfth day after the former one, and in that time the parts had become about as much involved here as they had been on the first side operated on, and I was here again compelled to divide the anterior half of the sterno-mastoid muscle. "Mark this, for it is important!" I attended the patient carefully and constantly for the first five days, and had every reason to feel even more than satisfied with the effect produced on the tumour. I was surprised, for it was gone! During my attendance on the case, I strictly enjoined non-interference with the ligatures, and perfect immobility of the head and neck; but I was in bed with an attack of severe colic, and threatening inflammation of the cæcum and colon, when what I instinctively dreaded took place, and the case was in the hands of my junior, an Assistant Surgeon, sent up to do duty under me during the season, whilst the convalescents are kept at the Landour Sanitarium.

Mr. F—, on the eighth day after the second operation was feeling in excellent spirits, and tried

to raise his head; this, from want of the support which the severed portion of the sterno mastoid muscle could no longer afford, brought tension on the other parts, and on the ligatured artery with the rest. The coat gave way and out came the blood; there was no room left to tie the ligatured branch above where it left the common trunk, and necessity compelled Assistant Surgeon McFarland to tie the common vessel. The result was death in four days from coma, caused by the want of sufficient arterial vis-à-tergo to rid the brain of the blood brought there by the vertebral arteries. I felt this as a great misfortune, and doubly so, because the patient, his friends, and latterly, I, myself, had been so sanguine in hoping for a happier result, whilst watching the case, as we did, from day to day. However, notwithstanding the result, I now, on reflection, feel certain that this has been one of the most instructive cases I have ever had.

There are three important points involved, and points on which definite and authoritative conclusion has never been absolutely arrived at, so as to fix with certainty what should be the line of action in similar cases.

The first is, as to the effect of stopping blood supply to a cancerous tumour.

Second, as to the possibility of tying both common carotids with safety.

And thirdly, whether cancer is really a blood disease or a local one, dependant on constitutional peculiarity.

As regards the first, I say where it is possible to cut off the blood supply, the cancer will be cured.

As regards the second, I now see that it is impossible, with any chance of success, to tie both common carotids, though I have seen in standard books the suggestion thrown out, that it may be possible, for it can and has been done successfully in some of the lower animals.

This, however, should not apply to man, for the brain is immensely larger in proportion, therefore, the capillary system is more extensive, and is a greater obstacle to overcome; the position of the head is also less favourable, unless you could make your patient lie upon his nose. Then, in man, the bony structures have less active vitality, and the bony canal through which the vertebral arteries proceed, afford a permanent obstacle to those arteries, increasing in calibre, when the necessity arises, excepting in very young specimens.

Respecting my third point, I know that my doubt will only be regarded as ignorant aeresy, still I base it upon three known pathological facts.

1st. That it has never been absolutely proved that cancer cells have been found in the general circula-



tion, away from the seat of disease; nor has it been proved, I believe, that inoculation with cancer fluid will produce cancer in another.

2nd. It is established that each part of the body, each tissue has the peculiar power of adding to or replacing its wasted parts by fresh material of its own peculiar kind taken from blood of the same description as that which goes to all other tissues.

3rd. If the whole of a cancer be removed so that none of its cells remain in a part, as is often decidedly done, why should cancer form there again if the locality did not possess the eliminating and vivifying power entirely in itself! and why should not the cancer matter be deposited always in fifty other equally favorable situations remote from this one?

Then to look at it by analogy,—how is it that the sun and rain will cause to grow in the same latitude and under exactly similar circumstances, mushrooms here, and toadstools in another spot at no great distance, but where the soil possesses different qualities and properties; and why should you not be able to grow either in every kind of soil exposed to the same influences.

## The Dominion Medical Journal,

A MONTHLY RECORD OF

MEDICAL AND SURGICAL SCIENCE.

LLEWELLYN BROCK, M.D., EDITOR.

TORONTO, OCTOBER 1st, 1868.

In consequence of the absence of the Editor, who was attending the meeting of the Association in Montreal, the first number of the Journal was not issued as well as we hoped, but our subscribers will see that we have improved its appearance. We have supplied it with a cover, and made some other improvements which we hope will give universal satisfaction. Our great object is to make the Journal a first class one, not only in appearance, but in its contents, and to do so we ask the united efforts of the Profession, not only by paying their subscription promptly, but by sending us interesting cases or papers for publication. Those subscribers who have not paid, will please forward their money registered to the Editor, who will forward receipts in succeeding number of the Journal.

ANSWER TO CORRESPONDENTS.—*Medico in Embryo*.—We will attend to your communication in our next issue, space would not permit us in this number.

## MEETING OF THE MEDICAL ASSOCIATION AT MONTREAL.

In our columns will be found a full report of the Association meeting held in Montreal, upon the second, third and fourth of September. This meeting was numerously attended, and the greatest interest taken in the proceedings throughout. The Profession in Montreal was well represented, and we can say, *en passant*, physically speaking, that it would be difficult to find a finer looking body of men anywhere. Ontario was not represented as well as we had expected, but owing to causes which are not under the control of the members of our profession who are liable to be called upon at any moment in some difficult or tedious engagement, and who therefore will always be denied of the certainty of attendance at these meetings, when they are held at a great distance from their respective homes, but whom we hope to see in large numbers at the next meeting in Toronto, to be held the second Wednesday of September, 1869. The chair was ably occupied by the President, Dr. Tupper, of whom we can state that to his high abilities, his thorough knowledge of parliamentary usages, and his complete command over his temper, does this Association owe its great success. Several of the newspapers in Lower Canada, endeavouring to create a false impression of the meeting throughout the country, exaggerated the debates. From our personal attendance upon the deliberations throughout the meeting, we can state that it was conducted with the utmost good feeling, and with the earnest desire of all for the success of the Association and the advancement of the interests of our Profession.

The French medical gentlemen, amongst whom were some of the leading practitioners of the cities of Montreal and Quebec, were unanimous in supporting and sustaining the objects of the Association, which are for the advancement of our Profession and for the general welfare of the whole community.

To our medical brethren in Montreal, who so sumptuously entertained the delegates and members of the Association, we are sure we are speaking the unanimous opinion of those who enjoyed their hospitalities, that they were delighted and surprised at the extent and magnificence of those entertainments.

VICTORIA MEDICAL COLLEGE.—We notice, in connection with this College, the re-appointment to the chair of Surgery of Dr. Canniff, and also the name of J. Widmer Rolph, M. D., to that of Associate in Clinical Medicine and Surgery.

ABORTION.

DR. FORDYCE BARKER places great faith in chlorate of potash. This was first suggested by Sir James Y. Simpson, on the ground that its oxygen producing power would be beneficial in fatty placenta. Whatever might be the truth of this chemical theory, clinical experience has convinced Mr. Barker of the value of this remedy. Patients themselves notice its effect upon the movements of the foetus. He relates several remarkable cases of success with this remedy after repeated abortions.

AGENT—PROVINCE OF QUEBEC.—We have appointed Mr. F. Gross, 36 Victoria Square, Montreal, as our Agent, for the obtaining of subscribers and advertisements, and for the collection of moneys due to us in the Province of Quebec.

THE MEDICAL CONVENTION.

FIRST DAY.

The First Annual Meeting of the Dominion Medical Association was held in the rooms of the Natural History Society. The following members were present:—A. B. Larocque, Montreal; Wm. Sutherland, Montreal; Ed. Monroe, Montreal; G. J. Potts, Belleville; John Reddy, Montreal; J. S. Scott, Toronto; G. H. Boulter, M.P.P., Sterling; R. P. Rinflet, Quebec, P. Q.; Amedee Gaboney, St. Martin; W. H. Brouse, Prescott; H. Blanchet, Quebec; E. H. Trenholme, Montreal; M. R. Meigs, Bedford; R. Astley Corbett, Port Hope; G. W. Bingham, Ayr; C. F. F. Trestler, Montreal; J. W. Mount, Actonville; John Bell, Montreal; Charles Picault, Montreal; D. C. McCallum, Montreal; Geo. W. Campbell, Montreal; M. H. Tindel, Robert Thibodo, Belleville; Bennet John Selley, Montreal; J. W. Pickup, Quebec; H. C. Bugg, Compton; Richard Markell, Osnabruck, Ont.; Joseph Leman, Montreal; H. Pare, Sherbrooke; Edward Roberts, Hawkesbury; Thos. B. Wheeler, Montreal; S. B. Schmidt, Montreal; F. C. Pinchand, Varennes; Chas. Martigny, Beauharnois; Alf. Villebonne, St. John Baptiste, Montreal; R. S. Black, Halifax, N. S.; Thomas W. Sheriff, Huntingdon; W. E. Bessey, Montreal; Pierre Monia, do.; Jules Robitaille, Quebec; A. H. David, Montreal; Jas. Chamberlin, Frelighsburg; Frs. W. Campbell, Montreal; O. A. Tessier, Quebec; Chas. Smallwood, Montreal; Robert Craik, do.; W. B. Malloch, do.; L. A. Portier, St. Clet; W. Marsden, Quebec; George A. Hamilton, St. John, N. B.; Robert Stewart, Belleville; Joseph Painchaud, Quebec; Alphonse Hebert, Quebec; A. M. Roseburgh, Toronto; W. N. Wickwire, Halifax, N. S.; Robert Edmonstone, Brockville; William Canniff, Toronto; Chas. Johnston, St. John, N. B.; Michael Sullivan, Kingston; Octavius Yates, Kingston; De Witt Martyn, Kincardine; Patrick O'Leary, Montreal; W. E. Scott, Montreal; J. P. Rottot, do.; Hector Pelletier, do.; R. P. Howard, do.; John

Erskine, Waterloo; E. D. Worthington, Sherbrooke; James H. Richardson, Toronto; L. Brock, Toronto; Eugene H. Trudel, Montreal; William Fuller, Montreal; W. A. Hamilton, Melbourne, Q.; Le Baron Botsford, St. John, N. B.; — Moren, Halifax, N. S.; Steeves, St. John, N. B.; James Thorburn, Toronto; W. Bayard, St. John, N. B.; — Charest, Beauport, P. Q.; Edward M. Hodder, Toronto; Chas. E. Lemieux, Quebec; G. S. Keater, St. John, N. B.; Frs. Dusault, Quebec; John Fitzpatrick, Baie St. Paul, P. Q.; E. S. Belleau, St. Michael; George P. De Grassi, Toronto; Edouard Rousseau, Quebec; Chas. Samson, Quebec; Walter James Henry, Ottawa; G. A. Masson, Lapraire, St. Jean Bat.; W. S. Harding, St. John, N. B.; Praseede La Rue, St. Augustine, Portneuf; R. T. Godfrey, Montreal; M. Turcot, St. Hyacinthe; J. B. Garneau, St. Anne, Champlain; Edouard Robillard, Montreal; Charles Tupper, Halifax, N. S.; Wm. Fraser, Montreal; G. W. Campbell, Montreal; W. H. Hingston, Montreal.

The President, Hon. Charles Tupper, M.D., took the chair at eleven o'clock.

The Secretary, Dr. Belleau, read the minutes of last meeting, held at Quebec, which were approved.

At the request of the President, the following Vice-Presidents took seats on the platform: Dr. Botsford, St. John, N. B.; Dr. R. S. Black, Halifax, N. S.; Dr. Panichaud, Quebec, and Dr. Hodder, Toronto.

On the order for the reception of members by invitation,

The PRESIDENT said that as the Association was cosmopolitan in its character, and recognized no distinction of nationality, they had been kindly invited by the American Medical Association to send a delegate to their last meeting. During, however, his (the President's) absence in England, no action was taken on that invitation. But the American Medical Association, at their meeting in May last, had appointed Dr. M. S. Davis, of Chicago, as a delegate to this Convention. A letter had been received from Dr. Davis stating that he had intended to be present, but circumstances beyond his control had arisen which, to his great regret, had prevented his attendance. He expressed, however, his satisfaction at the formation of a Canadian Medical Association, and closed by tendering, in the name of his Association, his best wishes for the success of this Association. The President, on reading this letter, spoke of the importance of a generous interchange of courtesies with their professional brethren on the other side of the lines. Such an intercourse would be most beneficial, and he trusted before this Association adjourned arrangements would be made by which this Association would be represented at the next meeting of the American Medical Association.

Dr. HINGSTON then read letters from Dr. Tache and Dr. Van Courtlandt, Ottawa, and a letter from the Montreal Literary Club, placing their Club House at the disposal of the members of the Convention during their stay in the city.

THE PRESIDENT'S ADDRESS.

Hon. Dr. TUPPER, the President, on rising, was greeted with cheers. He said: Gentlemen—The sixth order of the day, which has been placed in my hand since I entered this room, is the Annual Address of the President. Standing, as I do, in

the presence of members of the profession so much more distinguished in every branch of the profession than myself, though somewhat accustomed to public speaking, I should have great hesitation in attempting to give an annual address, were it not that I know that the motto of the very honorable profession to which we belong is everywhere recognised to be "Deeds, not words." Hence you will not expect from me any lengthened observations in relation to subjects of which so many of you are infinitely better qualified to treat than the gentleman upon whom you have conferred the great and undeserved honor of making him the first President of the Association. But in retiring from the chair in which you have so kindly placed me, I would do great injustice to my own feelings if I did not avail myself of this opportunity to express to you the great importance I attach to this meeting of the Association. In October last, in Quebec, the Association was formed by some 166 prominent members of the medical profession, representing all parts of the Dominion of Canada. At a time when a political union of the Provinces had been accomplished it was thought advisable to unite more closely the members of the profession in the Provinces, so that they might become better acquainted with each other, and might consult respecting the best means of elevating the profession and advancing its interests, and thereby advancing the interests of the people of this great Dominion. The business of the first meeting was necessarily of a preliminary character. To committees of able and intelligent members of the profession was entrusted the duty of submitting, at this most important meeting of the Association, the results of their deliberations, in order that the great body of the Association might deliberate upon the important matters presented to them, and take such measures as they believe conducive to the advancement of the great object they have in view. I say I would do great injustice to my own feelings if I did not avail myself of an occasion like this to express the deep importance which, in my judgment, attaches to this meeting—an importance to which my feeble language cannot do adequate justice. I regard it as important, because I hold it to be a meeting of members of a profession the most noble, the most unselfish, and the most influential of any secular profession or calling. (Cheers.) The most noble because our lives are devoted to the god-like work of relieving human suffering, and of contributing to that which is felt to be the most important object—not only the relief of human suffering, but the preservation of human life, whenever it is possible that human means may aid in its preservation. The most unselfish, because it is the only profession which, I believe, uniformly give its uniring services, without fee or reward, wherever suffering humanity demands attention and consideration at our hands. (Cheers.) The most influential, because, knowing, as it does, no distinction of creed, no distinction of nationality, no distinction of class, no distinction of party, the members of our profession form the connecting link between all creeds, all nationalities, all parties, and all classes, requiring as they do, a liberal education; requiring as they do, in order to the successful discharge of the high duties of their profession, no ordinary amount of talent; passing as they do from one class to another, from members of one political

party to another, they have an opportunity of exercising a moral and political influence which I believe is fully admitted to be certainly second to that of no other profession. (Applause.) It is not strange that, engaged as they are in the relief of suffering humanity, connected as they are with that which bears most deeply and most seriously upon the human mind of anything that can bear upon it, that they should acquire the influence they do. Who can witness the anxiety with which the parent, husband, brother, sister or friend turns to the medical adviser without knowing and appreciating the immense influence that he must necessarily and naturally acquire? He is looked for not only to relieve the body, but also to relieve that deep, mental anxiety, which perhaps is greater than any other feeling that the human mind can experience. It is this which gives the medical profession an ascendancy and an influence which devolves upon them a responsibility more deep and more important than it is possible for me to express in any language I can offer. It is necessary not only that members of this profession should be learned, in order to discharge the important duties of a profession which requires the deepest and most accurate knowledge, but they should also be good and patriotic—inspired by a lofty patriotism that will prompt them to avail themselves of the great opportunity that Providence has thrown in their way of advancing the best interests of their country, and to do all they can to elevate intellectually and morally the communities in which they are placed. (Cheers.) The members of the medical profession are oftentimes without those advantages which are enjoyed by members of the other professions. Those of the camp, the senate, the bar, and the pulpit, may have to encounter difficulties, but they have the sympathy of numbers to sustain them. Their ministrations, their official duties are performed in the presence of large numbers of people. They have an excitement calculated and qualified to sustain them in the discharge of the duties to which they are called. Without these stimulants, the members of the medical profession have to encounter fatigue and danger, and oftentimes what is worse to bear, ingratitude for the most earnest and most successful labours it is possible to perform. (Cheers.) The soldier, it is true, goes out to battle and exposes his life, but the excitement of the struggle, the hand to hand contest, sustains him, and well he knows that if successful the Victoria Cross will decorate his breast. The medical man exposes himself to dangers equally great, to pestilence more deadly than the most murderous fire to which the soldier can be exposed, and unsustained by the excitement which attends the soldier, he steadily, manfully, nobly discharges his duties in the most effective manner to his fellow man, knowing that no distinction awaits his success, knowing too, as I have said before, that perhaps he may be very poorly compensated or his services very poorly appreciated. (Loud Cheers.) But, though we have not the advantage of those who engage in commerce, who though they may have to undergo toil and anxiety, yet reap the rich reward of wealth, yet we have the proud consciousness to sustain us of discharging the highest and holiest duties that man can ever be called to discharge,—that of promoting the happiness and comfort of his fellow man. (Cheers.)

One of the most important subjects that will

engage the attention of this Convention is Medical education. To the position to which I have drawn your attention, a position of influence so great, of importance so deep, there attaches a very grave and serious responsibility. It becomes necessary, therefore, that we should by combination and co-operation with each other, adopt such a course as will give to those who are entering upon our profession, the high qualifications and high attainments so necessary to the proper discharge of duties of so important and noble a character. The subject of Medical education therefore, is a subject which will engage the serious attention of the Convention. Every member has the deepest interest in knowing that the qualifications of those who are to come after him shall be of the very highest character that it is possible to attain. In proportion as medical men are qualified for the performance of their duties will they deserve and receive the confidence of the public. The subject of a proper system of registration of medical men is of less importance to the members of the medical profession than to the community at large. We owe it to our fellow-men to provide some means whereby the great mass of the people may rightly distinguish between those qualified for the duties of the profession and those unqualified. If such means be not devised, injurious consequences affecting the health and happiness of the people would result. Then again the question of medical ethics, the question of the relation of professional men to each other, and to those who entrust themselves to their professional care, is also a subject which will be brought under the notice of this Convention. I do not think that any elaborate code of medical ethics is required. I believe a profession such as ours, so learned, liberal and exalted, and exposed as we are to difficulties inseparable from the practice of a profession like our own, which has no public tribunal to which appeal can be made—the only true code of ethics is attention to the golden rule, "Do unto others as we wish to be done by." (Loud cheers.) The professional man who stands by that golden rule will exhibit in all his dealings, both with his professional brethren and the community at large, the character of the true gentleman, and will require little else, I believe, for his guidance. Before I sit down, I will make a few observations in relation to the great importance of unanimity in our proceedings. There is an old saying—I wish I could say it was an old slander—that "doctors differ." While we know that it is impossible for men to see eye to eye in every matter, and to hold precisely the same views, yet I do feel that, in view of the high position of this Association, and the important objects we seek to attain, it is one of its first duties to give a gentlemanly and generous consideration to each other's opinions, whether we differ from them or not. The only way to make this organization a success is by conceding, as much as possible, to those differences of opinion which must necessarily exist in the discussion of those matters to which we are called to give attention. I wish to say that the eyes of this Dominion are upon us. Our meetings will result in good or evil, just according to the spirit that we enter upon the discussion of those difficult questions, and the amount of accord and agreement that may prevail amongst us. I will not detain you longer. I feel most deeply your kindness in elevating me to the high position of your President;

and I wish to say, before retiring from this chair, that I retire to the rank of a private member with a disposition to return your kindness and consideration, by doing in that private capacity, or in whatever position I may occupy, all in my power to advance the objects of this Association, and the profession, which I regard as more important than any other secular calling. I beg to thank you most kindly for the great honor conferred upon me, and will take more pleasure in sustaining some other person in the chair than I have had in occupying it.

The honorable gentleman concluded his address amid loud cheers.

#### REPORTS.

The Treasurer's report was read and referred to the following committee on Accounts: Dr. Rottot, Dr. Richardson and Dr. Steeves.

Dr. W. CANNIFF read the report of the committee on the Plan of Organization. On motion of Dr. Smallwood, it was decided to have this report printed in English and French, and distributed for the use of members before action be taken on it.

Dr. MARSDEN, of Quebec, chairman of the committee on Medical Ethics, presented his report, recommending the adoption of a code of ethics substantially the same as that adopted by the American Medical Association.

A brief discussion ensued.

Dr. FENWICK argued that medical men should refuse to give information to Life Insurance Companies respecting the health of their patients unless that information be considered strictly confidential.

At the suggestion of the President, the debate was adjourned till to-day, to enable members to look over the report.

On motion of Dr. BEAUBIEN, the Convention then adjourned till 3 p.m.

#### AFTERNOON SESSION.

The Convention resumed its sitting at 3 o'clock.

Dr. MARSDEN read the report of the committee on Registration of Medical Men, recommending the Association to take steps to secure the passage of an Act of the Dominion Parliament similar to the Medical Act of Great Britain, passed in 1858. The report was received and laid over till to-day.

#### PRELIMINARY EDUCATION.

Dr. HOWARD read the following report on Preliminary Education:

The committee on Preliminary Examinations beg to submit the following recommendations:

1. That all persons intending to study medicine in the Dominion of Canada be required to pass a matriculation examination in preliminary education, and that their professional education shall be held to commence from the time of their having passed matriculation examination.
2. That the matriculation examination for students in medicine in the Dominion of Canada shall be (with some alterations to be presently mentioned) that recommended by the Council of Medical Education and Registration of Great Britain, and adopted in the amended Medical Act of Upper Canada, and shall be as follows:
 

"Compulsory English or French language, including grammar and composition; Arithmetic,

including vulgar and decimal fractions; Algebra, including simple equations; Geometry, first two books of Euclid; Latin, translation and grammar; Natural History and Logic, and one of the following optional subjects: Greek, French or English (according to nationality of student); German—and the committee are of opinion that Mental and Moral Philosophy should be made compulsory at as early a period as possible.”

3. That although an acquaintance with Greek is very desirable, yet, as the British Medical Council have (at their meeting in July last, 1868,) deemed it advisable to defer at present enforcing a knowledge of Greek on all medical students in Great Britain, this committee, while recommending that language to all students, doubt the propriety of at present fixing the period at which a knowledge of it shall be compulsory.

4. That with the view of rendering the Matriculation examination efficient and uniform, it be conducted by persons engaged in general teaching, and officially connected with the Universities, Colleges, or Seminaries of the Dominion.

5. That the certificate of having passed the Matriculation Examination shall testify that the student has been examined in (1) English or French language, including Grammar and Composition; (2) Arithmetic, including vulgar and decimal fractions; (3) Algebra, including simple equations; (4) Geometry, first two books of Euclid; (5) Latin, including translation and grammar; Natural Philosophy and Logic; and in one of the following optional subjects: Greek, French or English, according to Nationality of student, German.

6. That a degree in Arts of any British or Canadian University, or of any other University of good standing, be accepted as a sufficient qualification to enter upon the study of medicine.

7. That all the students presenting themselves for this examination shall pay the sum of — dollars prior to examination, and, in the event of failure, half the sum shall be returned.

All of which is respectfully submitted.

R. P. HOWARD, Chairman.

#### PROFESSIONAL EDUCATION.

The following was also read, and, on motion, laid on the table for future consideration.

#### *Report of the Committee on Professional Education.*

As the curriculum of professional study required before obtaining a license to practice is now, since the action of the Medical Council of Upper Canada in 1866, almost the same in Upper and Lower Canada, your committee have not many new suggestions to make, but rather to reproduce, with such alterations and additions as have appeared to them advisable, the regulations at present existing in the Provinces of Ontario and Quebec, with the view to their adoption by the sister Provinces of Nova Scotia and New Brunswick.

1. The committee recommend that professional education shall extend, as now, over four years from passing of a matriculation examination, not less than three of which shall be passed at an incorporated university, college or school of medicine approved of; but your committee strongly recommend that the above period of four years be so passed.

2. That besides the six months' winter session,

there shall be in each year a summer session of three months, so that nine months in every year shall be spent in the continuous acquisition of professional knowledge and training.

3. That the following branches of Medicine shall constitute the minimum curriculum of professional education, which all medical students must furnish proof of having pursued, before presenting themselves for a license to practice Medicine, Surgery and Midwifery.

Descriptive Anatomy; Practical Anatomy or Dissections; Chemistry; Materia Medica; Institutes of Medicine (consisting of Physiology and General Pathology); Theory and Practice of Medicine; Principles and Practice of Surgery, Midwifery and Diseases of Women and Children; of each of which two courses of six months shall be required. Clinical Medicine and Clinical Surgery; of each of which two courses of three months shall be required; Botany; Medical Jurisprudence and Practical Chemistry; of each of which one course of three months shall be required.

4. Provided, however, that two or three months' courses of Practical Chemistry may be accepted in lieu of one six months' course of Theoretical Chemistry, and one three months' course of Practical Physiology, with a three months' course of Pathological Anatomy, may be accepted in the place of one six months' course of Institutes; and a three months' course of Public Hygiene may be accepted in place of the course of Medical Jurisprudence.

5. Every student shall furnish proof of having studied Practical Pharmacy for a period of three months.

6. All students must give proof by ticket that they have attended during twelve months the practice of a General Hospital whose daily average of in-door patients is not less than 50, and that they have attended the practice of a Lying-in Hospital for six months.

7. That all graduates of recognized universities and colleges of the United States, who shall have passed before commencing their medical studies, or matriculation examination, equivalent to that recommended by this Association, unless they are graduates of Arts, shall attend one full course at some university or corporate medical school in the Dominion of Canada and complete four years of medical study, provided they have completed the curriculum recommended by the association.

8. That there shall be two examinations—Primary and Final. The Primary shall comprehend the branches of Anatomy, Materia Medica, Chemistry, Institutes of Medicine and Botany; and the Final shall comprehend the branches of Theory and Practice of Medicine, Surgery, Midwifery, Medical Jurisprudence, Clinical Medicine and Clinical Surgery; and that the Primary examination shall be passed at the end of the second and third years.

9. That the age of 21 years shall be the earliest age at which any medical degree or diploma shall be granted.

10. That the professional examination shall be conducted in writing and orally.

(Signed), W. BAYARD, M.D.

Montreal, 2nd Sept., 1868.

Dr. HINGSTON read the following report:

STATISTICS AND HYGIENE.

The committee on Statistics and Hygiene have to report that, as regards the former, this country is now an almost unexplored field, and as regards the latter, no distinct and definite views are held, except in the practicable application of them by physicians and others engaged in the art of preserving health, and of warding off disease. For these reasons the committee require to make observation that might otherwise appear too elementary, and will reverse the order in which they occur.

For purposes of practical utility, Hygiene has been divided into general and special, or into public and private—relating to those laws which regulate the life of the individual, the application of these laws to the sanitary wants of a community, or to such individual composing that community. A subject of such vast moment has not received at the hands of medical writers that attention its importance demands. Ever and anon a disease sweeps with fatal strides over a portion of the earth's surface, when measures are adopted to stay its dreaded course or be relieved of its presence. But doubts have arisen whether measures ill-considered and hastily adopted, have not done much to aggravate the evils they were intended to alleviate. Of the necessity for some general laws on the subject there can be no doubt. Moses, the Law-giver, inculcated the care with which diseases occurring by infection and otherwise are to be prevented. Those laws were imposed upon the people, and were enforced with vigour. Although some portions of them were evidently intended to the land in which the Israelites then lived, and the circumstances in which they were placed, yet, after a lapse of so many ages, we cannot but admire the sanitary code which drew the distinction between clean and unclean beasts—which forbade the eating of blood—which was intended to prevent the spread of skin and infectious diseases generally—which prevented the accumulation of human excretions and emanations, and which prevented man when sick, or, when dead, becoming a source of disease and death to his fellow-man. Beyond Holy Writ, and less perfect than Holy Writ, we first meet in the writings of Hippocrates, in his Essays on "Airs, Waters, and Places." We need not here allude to the ancient Latin authors who here and there inculcate hygienic precepts. Within the memory of living man, public health, as a distinct branch of medical science, was unknown. Here and there, throughout Europe, we find disjointed attempts, by municipal and other corporate bodies, to preserve the health of those they govern. But the first successful effort was made in France to make the health of the people the first care of the Government. At the beginning of this century, under the first Napoleon, a Council of Health was formed, to superintend the sanitary operation in the capital, and, half a century later, the whole of France was placed under the surveillance of Central and Departmental Councils. In Great Britain matters moved slowly, and it was not until Doctor Southwood Smith urged the importance of sanitary laws, that the Government became fully alive to their necessity. The Nuisances Removal Act, followed by the Baths and Wash-houses Act, the Town's Improvement Clauses Act, and the Public Health Act of just twenty years ago. The latter

Act was productive of vast good, and the death rate of eight towns in England decreased from 30.5 per 1000 to 24.6 per 1000, a decrease in round figures of 6 per 1000.

The Common Lodging House Act, the Laboring Classes Lodging House Act, the Interment Act, and a Vaccination Extension Act and others have been passed, but a concise, yet comprehensive law for all sanitary purposes has yet to be introduced to the Legislature of Great Britain.

In the United States of America progress has been but partial. In 1866 the State of New York resolved itself into a Sanitary district composed of the Counties of New York, King, West Chester and Richmond. The time for action was not too soon, for the mortality in some districts was terrible. But the result of the labours of the Sanitary Commission, in the City of New York alone, in one year, was remarkable. 3,152 lives less were lost in the city than in the year preceding, notwithstanding the increased population. Yet it was a season of incessant rains and excessive humidity throughout a wide extent of country, the larger towns suffering an unusual amount of sickness.

If the state of matters in Great Britain and the United States was so bad, it is scarcely necessary to add that, in Canada, legislation has been confined to a single Act, passed in a period of alarm, and only intended to deal with epidemics as they occurred. Yet is there no branch of science more important than that which relates to man's physical and moral condition, which deals with the external physical and chemical agents on which man's health or life depends. And particularly in Canada, where persons are exposed to a new set of influences, which may shorten or prolong life, benefit or injure health, cure or cause diseases, in proportion to the manner in which they are understood.

In Canada, one of the healthiest climates in the world—the mortality in some of the cities is very great, and the necessity for action is urgent. Here and there in Canada certain municipalities have taken steps to remedy existing evils, but their efforts are too partial in action and too limited in their sphere to be productive of any important advantages. A necessity exists for the introduction by the General Government—or simultaneously by the Local Governments—of a comprehensive system of sanitary laws, not so complete, perhaps, as those of the Mosaic code, nor so severe in the punishment of any violation of them. The details of such Bill or Bills will, with the permission of this Association, engage the attention of this committee.

The report on Vital Statistics will be submitted at a later period of the session.

W. H. HINGSTON, Chairman,  
W. BAYARD,  
WM. CANNIFF,  
G. E. FENWICK,  
JAMES THORBURN.

On motion, the report was received and laid on the table for future consideration.

NAMING COMMITTEE.

The following committee was appointed to nominate officers for the Association: For Quebec—Dra. Worthington, Marsden, Beaubien, Fraser, Rosseau. For Ontario—Dr. Berryman, Victoria College; Dr. Thorburn, Toronto School of Medicine; Dr. Henry, Ottawa; Dr. Sullivan, Kingston; Dr. Martin, Kin-

cardine. For Nova Scotia—Drs. Black, Wickwire and Moren. For New Brunswick—Drs. Botsford, Hamilton and Steeves.

#### PLACE OF NEXT MEETING.

The PRESIDENT said that the medical profession and citizens of Halifax would deem it a favour if the Association would accept of that city as the place for the next annual meeting. He could assure the Association that they would meet with a most hearty welcome.

Dr. BOTSFORD moved, seconded by Dr. MOREN, that Halifax be the next place of meeting.

Dr. HODDER moved, seconded by Dr. BERRYMAN, that Toronto be the place.

Dr. HINGSTON moved, seconded by Dr. BROUSE, that Ottawa be selected.

After some discussion, it was decided to hold the next annual meeting at Toronto.

On motion of Dr. HODDER, it was decided that the time for the next annual meeting be the second Wednesday in September.

The Convention then adjourned till 10 o'clock Thursday morning.

#### SECOND DAY.

(Thursday) morning, at half-past ten o'clock, the adjourned sitting of the Medical Convention was resumed in the lecture room of the Natural History Society's Hall.

Dr. TUPPER took the chair at half-past ten o'clock, and was supported by Dr. Hodder, Toronto; Dr. Black, Nova Scotia; Dr. Le Baron Botsford, Vice-President, Dr. Painchaud, Quebec, honorary President.

The Secretary read the minutes, which were confirmed.

#### THE DELEGATES FROM THE DENTAL ASSOCIATION.

Dr. MARSDEN rose to call the attention of the meeting to the formation of a Dental Association, two gentlemen from which attended yesterday's sitting as delegates to the Convention. He submitted that these gentlemen, being specialists, and not regular members of the faculty, were not entitled to sit at the meetings of the Convention. After a discussion the subject was referred to the Secretaries, whose duty it was to examine the credentials of all gentlemen claiming to sit at the meetings.

#### THE CONSTITUTIONAL BY-LAWS.

The CHAIRMAN announced, that in consequence of a copy of the constitutional by-laws not having reached them from the printer, they were unable to proceed with their consideration as intended. In the absence of that document, however, he proposed to consider the report on Statistics and Hygiene, presented by Dr. Hingston.

The report having been placed in the hands of the assembly, Dr. Tupper suggested that the discussion should be upon clauses, and not upon the general subject.

It was moved by Dr. Canniff, seconded by Dr. Chamberlin—"That this meeting proceed to consider the report of the Committee on Statistics and Hygiene, read at the Convention on the previous day." Carried without a dissentient voice.

Dr. LAROQUE rose and addressed the meeting in the French language on the general subject under discussion, and was proceeding at some length, when

Dr. REDDY rose to propose that the report on Statistics and Hygiene, as presented, be adopted.

Dr. EDMONSON seconded the resolution; but before it was put to the meeting,

Dr. LAROQUE again rose, and was proceeding with his address, when several of the Faculty rose to order, and simultaneously proposed to restrict the learned speaker to ten minutes; others suggested five minutes, and business came to a standstill.

The CHAIRMAN ruled that the speaker should proceed in stating his views.

Further interruption ensued, when

The CHAIRMAN rose to suggest that instead of the report being adopted, as proposed by Dr. Canniff, it should be discussed clause by clause: that was the parliamentary and only way of getting through the business in a proper manner—(Question, question.) If any gentleman agreed with him on that point, he might move an amendment to the resolution to that effect.

Several gentlemen claimed the attention of the Chair, for the purpose of speaking on both sides of the question.

The CHAIRMAN put the resolution to the meeting, and it was adopted without a dissentient.

#### REPORT OF THE COMMITTEE ON A UNIFORM SYSTEM OF GRANTING LICENSES.

After a lengthened pause,

The CHAIRMAN rose and asked whether any gentleman present had reports to lay on the table.

Dr. G. W. CAMPBELL presented the report of the committee on a uniform system of granting licenses as follows:

#### UNIFORM SYSTEM OF GRANTING LICENSES.

As the reports of the committees upon preliminary and professional education embody the suggestions for the regulation of the qualifications of candidates for licenses in the Dominion of Canada, comparatively little remains for this committee to report.

Your committee beg leave respectfully to recommend:—

I. That every candidate for license shall furnish proof.

1. That he has attained the age of 21 years.
2. That he has passed the matriculation examination, and has completed the curriculum of Professional study recommended by your committees upon these subjects.
3. That he has pursued his studies for a period of not less than four years from the date of passing his matriculation examination.

II. That no person shall hereafter receive a license to practice medicine, or be permitted to register a degree or diploma within the Dominion of Canada, unless such degree, diploma or license has been obtained from some university, college, or incorporated school of medicine in her Majesty's Dominions, whose requirements for graduation or licensing are equal to the minimum curriculum recommended by your Committee on Medical Education.



III. That the professional examinations recognized shall be conducted in writing and orally, and that clinical examinations shall be conducted at the bedside in a practical manner.

IV. That this committee would recommend that there should be formed a General Medical Council of Education and Registration for the Dominion of Canada, who shall have the supervision of medical education, and should be empowered to appoint visitors to the different Universities, Colleges and Licensing Bodies in the Dominion, to ascertain that the minimum curriculum is duly enforced, and the examination fairly conducted.

V. That a degree, diploma or license from recognized bodies should only be received for what it sets forth, and that the holder should be subjected, before receiving license, to an examination in the branches of medicine not specified in the document.

VI. Your committee, in conclusion, recommends that persons entitled to registration in Great Britain should have the same privilege granted to them in the Dominion of Canada.

GEO. W. CAMPBELL, M.D.,  
Chairman of the Committee on Licenses.

Several of the faculty dissented from various points in the report.

The CHAIRMAN stated that he would request the Secretary to get the report printed and laid on the table as quickly as possible. This was assented to, and the subject dropped.

Dr. EDMONSON moved, and Dr. Brouse seconded—"That each speaker be limited to five minutes"—which was, after an amendment that fell to the ground had been withdrawn, unanimously agreed to.

Dr. HINGSTON then read the following letter from Dr. Ed. Barnard, jr., on the subject of Mineral Waters.

"MONTREAL, 3rd Sept., 1868.

"GENTLEMEN,—May I be allowed to call your attention to the accompanying extracts from official reports of Dr. T. Sterry Hunt, F.R.S., chemist to the Geological Survey of Canada, giving the analysis of the Varennes mineral waters, and also to notes written years ago by a distinguished member of your society—Dr. Charles F. Pinchaud, of Varennes. Both gentlemen have, in their papers, earnestly requested the medical profession to look into the merits of these waters, which, besides many other valuable medicinal properties, contain 'two rare bases—baryta and strontia—which have never hitherto been observed in any of the mineral waters of this continent. See Dr. Hunt's report.

"Dr. Painchaud claims to have used them for years with repeated success in the treatment of several diseases, and both the above named gentlemen insist on their value and unite in their desire to have their virtue looked into by the medical faculty.

"These strong recommendations will be my excuse for troubling you so far as to request your naming a committee to report on the medicinal value of the waters which will be supplied you fresh from the 'Saline Spring.'

"Dr. Hunt has for years recommended these waters to be charged with carbonic acid gas, stating that by this simple process they could be made fully equal and superior in some respects to those of the

Seltzer and the Congress Springs. Waters thus prepared will also be placed at your disposal.

"The report of such a committee, if favourable, might materially assist in starting anew, as a place of summer resort, the Springs of Varennes, which a century ago were greatly frequented by the descendants of the old French emigres. Besides bringing to Canada a number of American tourists, who would be attracted by the incontestable beauty of the locality, many invalids would derive benefit from the use of the waters.

"I have, &c.,  
(Signed) "EDW. BARNARD."

The Chairman and Members of the  
Medical Convention.

After a desultory conversation, it was ordered that the letter be received and placed on the files, it not being the province of the Association to accede to the request therein contained.

#### REPORT OF THE COMMITTEE ON REGISTRATION.

The committee appointed in October last, at Quebec, to consider the best means of securing the proper registration of licensed practitioners throughout the Dominion of Canada, beg leave to report that, after mature deliberation, they recommend that this Association take the necessary steps to have carried through the Dominion Legislature an act similar (in so far as it is adapted to this country) to the Medical Act of Great Britain, passed in 1858, and that a committee be named to carry this report into execution.

That the members of this Association may have an idea of the act which the committee recommend, they append a few of the features, viz.:

A council called the "General Council of Medical Education" is established. This council consists of one person chosen from and by each of the various licensed bodies and the English universities. The five Scotch universities chose two members between them. Six members are also named by Her Majesty. A registrar and branch registrars are appointed. Provision is made to register all licensed practitioners up to a certain date for a nominal sum. Qualifications obtained after the passing of the act pay a higher fee for registration. Council has a right to demand of any body their course of study and character of their examinations, and any member of the council may attend the examinations. None but registered practitioners to be able, after a certain date, to receive charges in a court of law. A severe penalty is named for any one falsely stating they are registered.

These are only a few of the leading features of the act, but they will serve to show its character.

All of which is respectfully submitted.

(Signed) W. MAESDEN, M.A., M.D.,  
Chairman.

F. W. CAMPBELL, M.D.,  
W. CANNIFF,  
HEC. PATTISON, M.D.

This concluded the business for the morning sitting, and the meeting here adjourned till 2 p.m.

#### AFTERNOON SESSION.

The chair was taken by Dr. Tupper, and sitting resumed at half past two o'clock.

The assembly proceeded to the consideration of the report by the committee on the plan of organ-



ization, otherwise the constitutional by-laws—taking the by-laws *seriatim*. After a desultory conversation, attention was directed to the clause excluding members of the Association who possess particular dogmas.

The CHAIRMAN assumed the meaning of the clause to the simple exclusion of those whose doctrines were of the class of those termed heretical by the medical faculty at large. Good orthodox physicians might, however, sometimes desire to give special attention and practice to some particular disease—for instance, diseases of the eye.

Dr. MARSDEN, of Quebec, one of the committee, explained that the clause was intended to meet the case of gentlemen who based their practice upon a single theory, as homeopaths and other similar practitioners.

Dr. BAIRD, of Montreal, knew of physicians in regular practice who were hydropathists, and turned their offices into bathing rooms. He scarcely thought that because members of the faculty gave this branch of science their especial attention, they should, therefore, be excluded from the benefit of membership of this association.

The clause was then passed.

The clauses next in order were read by the Chairman *seriatim*, and if not dissented to, summarily passed, and continued and general conversation in all parts of the room.

Dr. WORTHINGTON, Sherbrooke, here intervened and suggested whether the discussion, which promised to prove of unusual length and tediousness, might not be adjourned for a short time to enable them to receive the report of the committee on nominations of officers for 1868-9, as many of the members of that committee were most anxious to get away to go home.

It was proposed that such report be laid on the table, and thus summarily disposed of.

An M. D. said that many present would object most strenuously to so important a subject as the election of officers being so easily shelved.

Dr. HINGSTON thought it most objectional that so important a matter as the passing of by-laws should proceed.

It was moved irregularly by Dr. CRAIG, and seconded by Dr. REDDY, "That the meeting now proceed to the election of officers."

It was moved as an amendment by Dr. HICKSON, and seconded by Dr. TRUDELL, "That the meeting proceed to the consideration of the organization of by-laws."

Upon representation by the members of the committee of the hardship of their being detained after many days, for again another day, from their practice, the mover and seconder of the amendment at once withdrew their motion.

Dr. WORTHINGTON said that having been met so handsomely, he was sure the members would consent to remain to the last possible moment to aid in the passing of by-laws, on the understanding that the appointment of officers should be proceeded with before the session closed for the day.

The CHAIRMAN proposed that they should for the present proceed with the discussion on by-laws as far as possible, holding it as imperative that the

discussion should be adjourned to enable the election of officers to take place before the time of departure of the train.

Several gentlemen addressed the meeting in French amid interruptions and cries of "question." After a lapse of a considerable time the Chairman again proceeded with the reading of the by-laws.

#### AT SEA AGAIN.

Interruptions again drew the discussion out of the regular channel. A question now arose whether the rules were binding upon members of the association if not subscribed to by each member in his own hand writing.

The Chairman quoted from the standard rules of the Association, and amid some applause, demonstrated clearly that the by-laws already passed as the rules of the Association, were binding upon every gentleman admitted as a member under these rules.

The same gentleman who started the conversation with respect to the pamphlets being printed in French and English again arose, and still addressing the audience in French, could not understand why it was that if members did not sign their names agreeing to the rules, they were bound by these rules.

Two other French members, who had taken prominent parts in the same discussion, again raised objections on the point now under discussion.

PASSED AT LAST.—Dr. BROUSE at length hastily moved and Dr. CAMERON seconded, "that this constitution as now amended, be the constitution of the association." Carried unanimously.

CHAIRMAN, who called for the committee to report on the nomination of officers, to present their report, which was accordingly done, and, judging by the plaudits bestowed as each name was read, the selection must have given universal satisfaction, each and every name being greeted with applause.

No amendments being proposed, the whole of the officers as nominated by the committee, were declared duly elected. The following is the list:

Presidents—Hon. Charles Tupper, M.D., C.B.; Vice-Presidents—Quebec: G. W. Campbell, M.D. Ontario: E. M. Hodder, M.D. New Brunswick: Dr. Le Baron Botsford. Nova Scotia: Hon. David McNeil Parker, M.D. General Secretary: G. O. Belleau, M.D. General Treasurer: Dr. Blanchet. Secretaries for Ontario: W. Canniff, M.D.; do. for Quebec, Dr. Rottot; do. for Nova Scotia, Dr. Arthur Moren; do. for New Brunswick, Dr. W. S. Harding. Dr. Beaubien, President of the Election Committee. Dr. Martin, Secretary do.

Three cheers for Mr. Tupper were given. (Applause.)

Three cheers for Dr. Tupper were then proposed and given in ringing style.

Dr. TUPPER, in thanking the assembly for their acknowledgement of his re-election, said he was at a loss to express his gratification at the honor they had again conferred upon him, a gratification doubly intensified when he recollected the circumstances of his election last year. There was, however to him a subject of regret in their making this

selection, in that among them were men wise, high, honorable, and distinguished, with reputations, not confined to the immediate locality, but extending to the whole of the Dominion, the adjoining Republic, and even to Europe; it was, he repeated, a subject of regret to him that among these men, they had not found some one among them to fill the high and honorable post they had that day again conferred upon him. The circumstance of his election, nevertheless, whilst causing in him the feeling to which he had just given expression, led him also more fully to appreciate the great honor and distinction they had done him. He would add, at the risk of appearing egotistical, that although he had been proposed to yield up the high place which he had filled with so much pleasure to himself, yet he would yield to no living man in his constant and anxious desire to advance the true interests of his profession, and to carry out in their highest sense and all their integrity, the objects of the Association of which they were members. The Association, as he conceived it, was formed for the benefit of the profession and interests of society generally. For himself, out of the past six months, he had only had leisure to spend one month with his family, therefore, it would be apparent to them that any leisure time at his disposal would naturally be devoted to them; but in the case of the Medical Convention he had felt his duty to be imperative, and that to perform that duty he must at all risks and at no matter what inconvenience place himself at their service on this occasion (cheers); and it was in pursuance of that first duty that he had come among them that day. He believed that the future of the Association was a future of greatness, and a future of extended usefulness, and he felt that his place was really and truly among them. When this great Dominion was being constituted, he had been offered a cabinet portfolio, and at various times other high offices in various spheres of usefulness, but such offers he had invariably declined, feeling better able to devote himself with a greater prospect of usefulness to his fellow men, and to the profession at large. In his present state, and on that account, if on that account alone, he felt that he was entitled to be relieved from the claims of other public duties, in order that he might devote himself to the high and honorable profession to which he ventured to say he had devoted the most valuable hours of his life, to which he had consecrated such powers as he possessed, and to which he was bringing up his eldest son. Such had been his life, such his highest ambition; and it was with this devotion to the profession that he had entertained that feeling of regret to which he had given expression in the most forcible manner in his power. And now nothing remained for him but to thank them most warmly for re-electing him as their president. The learned gentleman then resumed his seat amid great and continuous cheering.

The sitting was then declared adjourned till 11 o'clock Friday.

### THIRD DAY.

The Convention resumed its business at 11.30 a.m. yesterday.

Dr. DAVID called attention to an incorrect and unjust statement made in the report of the proceedings which appeared in the *Gazette*, headed "A

Storm Brewing," to the effect that a "French Canadian M. D. protested loudly and emphatically against the by-laws being printed in English." This statement was entirely incorrect, and the *Gazette* should be called upon to correct it.

Dr. LABOCQUE, the M. D. referred to, said that he had not objected to the printing of the by-laws in English. All he had requested was that the constitution should not be hurriedly adopted, before the French Canadian gentlemen had an opportunity of reading it in French, because several of them found it impossible, in the hurry of debate, to fully understand the English translation. He had not protested loudly nor emphatically against the constitution being printed in English, nor had he endeavored to raise a storm. He and his French Canadian *confreres* came to the Convention, not to foment quarrels, but to work in harmony with their English brethren in promoting the general welfare of the Association. (Cheers.) He knew the utility of the Association, and he hoped the time would come when it would take a higher rank in the Dominion—high as its position now was. (Cheers.)

A member thought that a resolution should be passed by the Convention protesting against the unjust statements of the *Gazette*, but on the President's stating that he had no doubt, after what had been said, a correction would be made, the matter was allowed to drop.

### THE BY-LAWS.

The Convention then proceeded to the consideration of the report of the committee recommending a code of by-laws for the Association, and adopted them one by one, with some alterations.

Dr. SMALLWOOD moved, seconded by Dr. DAVID, that the by-laws, as amended, be adopted.—Carried.

Dr. TUPPER observed that it was impossible for the Convention to proceed with the consideration of the various reports received this session, and therefore it would be better to postpone them till the next annual meeting, with the exception, perhaps, of the Code of Ethics.

Dr. HINGSTON moved, seconded by Dr. ROTTOR, that the Code of Ethics, as proposed by the committee, be adopted.—Carried.

Dr. MARSDEN moved that the following Committee of Arrangements be appointed:—Drs. Hodder, Richardson, Berryman, Thorburn, Hall, Canniff and Grassi.—Carried.

Dr. LABOCQUE presented the second annual report of the Montreal Sanitary Association.—Referred to the Committee on Hygiene.

The following Committee on Printing was appointed:—Drs. David, Smallwood, Hingston, Marsden, F. W. Campbell and Robillard.

On motion, all the Standing Committees of last year were re-appointed.

Dr. MARSDEN moved that the Convention re-consider the action taken the previous day on the communication respecting mineral waters, with a view to recommending them.

Dr. HINGSTON thought it would be injudicious to re-consider the matter, and bring those springs into such prominent notice.

Dr. DAVID was of the same opinion. If they paid so much attention to these mineral springs

they would be besieged with communications from the proprietors of the many springs in the country.

Dr. Marsden's motion was lost.

Dr. BAYARD moved, seconded by Dr. SCOTT, that the thanks of the Association be tendered to the Grand Trunk Railway, Canada Inland Navigation Company, Richelieu Company, Quebec and Gulf Ports Company, Intercolonial Steamboat Company (plying between St. John, N.B., and Portland), and Great Western Railway.—Carried.

A vote of thanks was also tendered to the Natural History Society for their kindness in allowing the Association the use of their hall.

Drs. Rottot, Smallwood and Fraser were appointed as an Auditing Committee.

Dr. HINGSTON moved, seconded by Dr. BEAUBIEN that the thanks of the Association be tendered to the Press of Canada, and the Montreal Press in particular, for the aid they had rendered to the Association.—Carried.

The PRESIDENT received a letter from Dr. Edwards, asking, on behalf of the Chemists' Association, the privilege of making some observations on Pharmaceutical Education, and of advocating a separate and official course of study for Pharmaceutical students.

The PRESIDENT referred the gentleman to the Committee on Chemists and Materia Medica.

Dr. SCOTT, moved, seconded by Dr. CRAIK, that a vote of thanks be tendered to the President, Dr. Tupper, for his very able conduct in the chair, which has conducted so much to the interest and harmony of the Association, and the dispatch of business.—Carried with loud cheers.

Dr. TUPPER briefly responded.

Votes of thanks were then tendered to the Vice-Presidents, the general Secretary and the local Secretaries, for the efficient performance of their duties during the past year.

The Convention then adjourned.

### THE DEJEUNER OF THE FACULTY AT THE ST. LAWRENCE HALL.

On Friday morning, at nine o'clock, the *dejeuner* announced in Thursday's *Gazette*, took place in the dining room, St. Lawrence Hall, and was largely attended by the faculty.

The chair was taken at a quarter past nine o'clock, by G. W. Campbell, M.D., Vice-President of the Association, the President, Dr. Tupper, sitting on the one side, and His Worship the Mayor, on the other, supported by the following gentlemen, on the right and left:—Charles Tupper, M.D., Wm. Workman, Mayor, Attorney-General Oimnet, Chas. S. Rodier, Thomas Morland, W. Bayard, M.D., and Edward M. Hodder, M.D.; Mr. Justice Mondet, Mr. Justice Loranger, Mr. Justice Mackay, W. Marsden, M. A., M.D., J. Bouchard, and Dr. Beaubien.

The *coup d'œil* presented on entering the breakfast room was pretty in the extreme. Four tables extending its entire length had been laid, with the usual centre table for the Chairman and his supporters across the head of the hall. The tastefully arranged vases of flowers and well-ordered appear-

ance of the room, altogether rendered the scene as brilliant as it was possible for a mere *dejeuner*, or assemblage of gentlemen engaged in the agreeable, but by no means beautiful act of eating and drinking.

The following was the bill of fare:—

English breakfast tea; black tea; green tea; coffee. *Fish*—Broiled black bass; broiled fresh herrings; fried filet of halibut, fried fish balls. *Broiled*—Beefsteaks; mutton chops; spring chicken; bacon, ham; kidneys. *Fried*—Calf's liver; sausages; tripe. *Eggs*—Boiled, scrambled, fried; do. plain; omelettes, with parsley; do. with ham; do. with cheese; do. with onions. *Cold Meats*—Boned turkey; game pie; boiled pig's head; beef tongue; ham; beef. *Potatoes*—Fried; boiled; baked. *Bread*—Brown bread; French bread; twist bread; corn bread; hot rolls; dry toast; milk toast; buttered toast.

The *dejeuner* having been discussed and fully enjoyed, the tables were cleared and the following official list of toasts were gone through:—"The Queen," "The Governor General," "The Mayor," "Our Guests," "The Canadian Medical Association," "The Retiring Officers," and "The Press," and "The Ladies."

In proposing "the Queen," the Chairman said he would give them just briefly the loyal toast which they all knew so well and would so heartily respond to—Her Majesty THE QUEEN. (Received upstanding.)

The CHAIRMAN then proposed the Governor-General of Canada, Lord MONCK. (Received upstanding with honours). In proposing the next toast,

The CHAIRMAN said he regretted it was not put in other hands, by which greater justice could be done to it. He had to propose the members of the medical profession—their brethren—to whom they had given that *dejeuner*, "Our Guests, the members of the profession from the distant provinces." (Cheers, three times three upstanding.) In the course of his remarks he expressed pleasure in meeting the gentlemen of the faculty from Ontario, Quebec, and all parts of the outside Provinces of the Dominion—from the right, the left, the higher and the lower Provinces. Referring especially to the Province of Nova Scotia, he said if it was left to the doctors to settle among themselves, there would be no further question of repeal in Nova Scotia, for they, the medical fraternity of this part of the great Dominion, would not let them go home again until they had agreed right heartily to the Confederation. Those men of Nova Scotia were too valuable, too good to lose from among the classes embraced in the union, and, as he said before, they could neither afford to loose them, nor would they do so, if the issue rested with the doctors. (Laughter.) He hoped that the patience of gentlemen from distant places had not been exhausted, and that the delay they had already experienced in getting away would not inconvenience them. The Medical Faculty of Montreal had given them all here present this day a right warm and hearty welcome, and he only hoped that the individual members who had attended had found as much pleasure and advantage in attending there as had himself done. (Cheers.)

Dr. TUPPER then rose to respond: He did not intend to detain them long as he knew they were waiting, and the hour to which they had adjourned.

the meeting that day was near at hand. He referred at some length to the enterprise and good feeling displayed by the members of the profession in Montreal, in inviting the whole profession of the great Dominion to this city for the purpose of the Convention, and in entertaining them in the right hospitable manner in which they had been entertained. Having been again elected President of the association, he supposed a few words would be expected from him on behalf of the association, and he acknowledged that obligation to his many able and distinguished friends around him, among whom, if any distinction could be made, he was, if anything, most particularly glad to number the gentlemen from the Maritime Province. After dinner, speaking was a thing he had never been much accustomed to, but after breakfast, speaking was a matter entirely novel and strange in the whole of his experience. (Laughter.) But this he would say, that this hospitable and liberal reception of the general medical profession of the great and immense Dominion of Canada, by their brethren of Montreal, argued not only a wise generosity and enterprise on the part of the latter, but a right appreciation of the objects and scope of the society of which they were all equally members. Now let his friends around him reflect for a moment on what had taken place. They had been received not only with every welcome and demonstration of kindness and friendship, but to fill the cup to running over, the Montrealers had given them that splendidly arranged *Conversazione*, and, cunning fellows, they had brought to that delightful gathering not only all the medical talent of that great and important city, but brought with them the collective beauty of the place to heighten the interest and attach a charm and interest to the proceedings. It was all very well for old benedicts like himself to admire at a distance, and then, like the knight both gallant and gay, who deceived the lady and then mounted his steed and galloped away to discreetly retire. But those younger members of the profession, whose hearts were not steeled, and who were still martyrs to the miseries of bachelorhood—some of those young men he would be bound, would be found to give their most hearty cohesion to Intercolonial Union. The chairman had referred to Nova Scotia. Now he was not going to give them a political dissertation—nor indeed would he touch upon politics at all, further than to say in connexion with this subject that they could readily understand—those who had been gratified with a view of this magnificent and gigantic city during the past week—how the Nova Scotians, fresh arrived from their little place, Halifax, little and unimportant compared to this wealthy and progressive city of Montreal—would feel when they contemplated the signs of that wealth and progress; they must feel as he felt, that Halifax and towns and cities of that class in the Provinces of this Dominion, must in the march of events, be necessarily swallowed up and absorbed by this—the real and commercial centre of the vast body known as the Dominion of Canada. Looking back upon the past, looking hopefully forward into the future, he had no fear for the prospects of the Confederation. So much had he ventured to say on Confederation and Nova Scotia, and now he had done with that subject. Returning nearer home, and speaking of the Medical Association, the learn-

ed gentleman descanted at some length upon the past history, present position and future prospects of the society. He looked upon it as containing all the elements, when united, to constitute a great and powerful institution for the public good; and, in illustration of his meaning, he instanced the city of Montreal, built up of the industry and perseverance of united French, English, Scotch and Irish—an edifice to wonder at, and of real significance from whatever point of view it was regarded. In a similar strain the learned President continued for some time, concluding by again thanking the assembly for the kind way in which they had received him; and on sitting down there was a burst of tremendous cheering.

Dr. HODDER, of Toronto, observed that after Dr. Tupper's speech, he might be excused from making any lengthy remarks. As a representative of the Medical profession of Ontario, he expressed the pleasure their visit had given them. He thanked them for the sumptuous entertainment, and hoped that next year Toronto would be able to return such hospitality. (Applause.)

Dr. LAROCQUE briefly addressed the assembly in French.

Dr. BAYARD, of St. John, N. B., said he had come as a matter of duty, but that henceforth the visit would be one of pleasure.

Dr. MARSDEN, of Quebec, on behalf of the profession in that province and city, expressed their thanks, and said they were proud to have been the originators of what the medical men of Montreal had brought to perfection. He hoped their Association would become a real union, and carry out its real objects by keeping clear of politics or feelings of nationality, and become a real scientific voice throughout the country. He would now call on one of the oldest members of the profession, on his right, Dr. Painchaud.

Dr. PAINCHAUD made a long and humorous address, which excited much amusement.

The CHAIRMAN said that the next toast was not only that of a worthy citizen of Montreal, but an esteemed public officer—His Worship the Mayor. (Applause.)

HIS WORSHIP said:—I did not know till a long time after supper last night that I should have so agreeable a breakfast this morning; but I am very happy at having this opportunity of expressing the sentiments of the people of Montreal, as well as my own, on seeing their good friends the Doctors among them. These sentiments of respect and gladness are both natural and proper, because the Doctor is generally our first friend in the hour of affliction and the last attendant in the hour of death. When prostrated on the bed of sickness, we expect his daily visits, and anxiously ask him "How's the case?" And when the case gets more desperate, and we draw nearer to the end of Time, we then ask him "How stands the glass, Doctor?" and his replies are listened to with the greatest awe and faith. I confess that as I walk through the streets and frequently meet one of our old practitioners, the reflection occurs to me, There goes a man who has certainly, during his lifetime learned many lessons of the essence of human nature and the deep ways of the human heart. When they look back down the long vista of honorable years passed in the discharge of their noble profession, and reckon up the number of their friends gone and scenes

passed through, and of the influence which these scenes, circumstances and friends must have exercised and still continue to exert, although silently, on life and character, they must fully recognize the truth of the sentiment expressed in these words:—

"Departed minds abiding influence spread;  
The world is taught and governed by the dead."

I will no longer detain you, but conclude by thanking you for your hospitality, and reiterating the previously expressed sentiment of the joy and cordial welcome of the citizens of Montreal.

The CHAIRMAN said they had a number of professional fellow-citizens amongst them, he would propose the toast of "The Medical Profession of Montreal," coupled with that of the "Bench and the Bar."

The toast was suitably responded to by Judge MONDELET and Judge LORANGER.

The CHAIRMAN called on the Vice-President, Dr. Peltier for a toast.

Dr. PELTIER proposed the "Canadian Medical Association. Since their proceedings had been published by the Press, he thought it was a pity that the ladies had not been present; he hoped, however, that the non-professional citizens who were present, would conclude there was no difference of opinion among them. He would call on Dr. Beaubien and Dr. Marsden.

Dr. BEAUBIEN made a suitable reply.

Dr. MARSDEN said he would simply thank Dr. Peltier; their real success as an Association depended upon their union, and he must say they had been happy in the choice of officers elected last year. He had witnessed how skilfully Dr. Tupper had conducted the proceedings, so that all unnecessary discussion might be avoided; he felt happy in returning thanks to the President and other officers. (Applause.)

The CHAIRMAN now called on Dr. Frazer for a toast.

Dr. FRAZER said he thought they were indebted to the retiring officers of the past year. The Association had now established a basis for medical education, which he trusted would be carried out by their successors. He would therefore propose "The Retiring Officers."

Dr. HINGSTON, in reply, alluded to the election of Dr. Campbell and Rottot, men who would do all in their power to promote the interests of the Association. He would state, on behalf of the retiring officers, that, being out of harness, they would be able to do more for the Association. He believed the Committee had done wisely in adopting the system of rotation, as the office of secretary was particularly onerous.

Dr. BLACK, of Halifax, said he could not leave the city without expressing his acknowledgement of the manner in which they had been received, and would propose "The Profession of Montreal."

Dr. DAVID being loudly called for, said although he regretted he had been selected to acknowledge the toast, he did so with pleasure. As their time was limited, he would not make any further remarks, but propose "The Press."

Mr. PENNY briefly responded to the toast.

The toast of "The Ladies" was now proposed, and humourously responded to by Mr. Chapleau.

The agreeable proceedings now came to a close, and the members of the Convention betook themselves to their morning sitting.

## THE CONVERSAZIONE.

The disciples of Esculapius proved themselves last evening to be thoroughly conversant with the rites of hospitality. A brilliant *conversazione* given under their auspices at McGill College closed the day's labors and inaugurated the series of entertainments that have been projected for the enjoyment of their professional guests during the week. Fully a thousand invitations were issued, and the halls were, as a consequence, crowded with a distinguished gathering of citizens and strangers. Both within and without the buildings, every attraction that means or taste could supply were provided for the enjoyment of guests. Hundreds of many colored lamps lined the approaches from Sherbrooke street, and sparkled among the little forest of trees that stretches past the front of the College, while an electric blazed from above the centre doorway, and fairly illuminated McGill Avenue throughout its entire length. This latter, produced by the passage of an electrical current from a Groves battery of 80 cells, through two charcoal points, was under the charge of Dr. Baker Edwards, who had certainly every reason to be satisfied with the striking success of his experiment. Dr. Edwards afterwards interested a large auditory in Dr. Dawson's lecture-room, by a series of experiments with the Giessler Tubes, showing the electric light in air, vacuo, and nitrogen gas. The museum and library also served, in no small degree, to furnish means of amusement, while the large hall upstairs gave opportunity for promenading or pleasant chit-chat.

In the centre building, M. Gilbert, the celebrated *chef de cuisine*, offered the attractions of two large supper-rooms, and certainly found no want of patrons.

The *Conversazione* was, in every way, a gratifying success, and only provoked the one regret, that its recurrence is not probable in this city for many years to come.

General Bisset and staff, accompanied by the officers of *Le D'Estree*, (who dined at the mess of the 100th Regiment last evening), Dr. Tupper, and many other distinguished guests, were present.

The following was the

### Programme de la Partie Musicale.

1. Bande  
CHASSEURS CANADIENS.
2. Souvenir de Kamarouska.....J. Hone.  
Choe: MM. MAILLET, CHRISTIAN, PAYETTE et  
LAMOTHE.
3. Etude de concert (Inedet.....Mills.  
M. OCT. PELLETIER.
4. Grand Air d'Attila.....Verdi.  
Madame PETIPAS.
5. Bande  
CHASSEURS CANADIENS.
6. The Heart Bow'd Down.....Balse  
Monsieur LAVOIE.
7. Grand Fantaisie sur Piano  
Madame PETIPAS.
8. Oh! Canada mon pays, mes amours, Labelle  
Monsieur MAILLET.
9. Grand Duo de la "Liberte," (Puritani)..Bellini  
MM. LAVOIE et LAMOTHE.
10. Bande  
CHASSEURS CANADIENS.  
Finale: GOD SAVE THE QUEEN.