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THE
BRITISH AMERICAN JOURNAL.

ORIGINAL COMMUNICATIONS.

MEDICAL DEPARTMENT.

ART. XL.—*On the Differential Stethoscope or Stethophone.* By W. MARSDEN, M.D., Quebec.

Upwards of a year since a gentleman lent me the following interesting paper on the "Differential Stethophone, and some new phenomena observed by it," which will be found in the 9th Volume of the Transactions of the Royal Society, page 196, and was read on the 22nd April, 1858. It is from the pen of S. Scott Alison, M.D., Assistant Physician to the Hospital for Consumption, and was communicated by Professor Tyndall, F.R.S. Having procured the instrument soon after, I have since had many opportunities of testing its usefulness. In affections of the heart in particular, it has afforded the most satisfactory results. In fact, no medical practitioner who professes to treat diseases of the chest, ought to be without it. The important character of the paper will I trust be a sufficient excuse for its length.

"Engaged for some years in investigations into the phenomena of audition, I have become cognizant of some facts which I believe have hitherto remained unnoticed, and which are certainly not generally known to physicists and physiologists.

The first of which I shall treat is the restriction of hearing external sounds of the same character to one ear, when the intensity is moderately, yet decidedly greater in one ear than in the other, the hearing being limited to that ear into which the sound is poured in greater intensity. The sound is heard alternately in one ear and in the other, as it is conveyed in increasing degrees of intensity, and hearing is suspended alternately in one ear and in the other, as the sound is conveyed in lessening degrees of intensity.

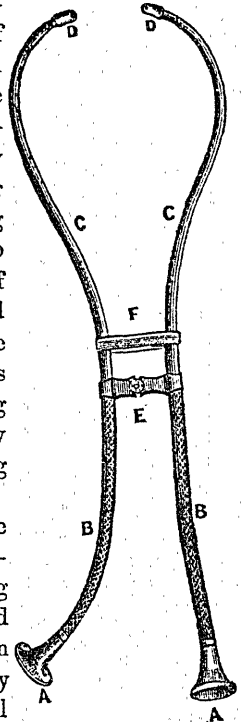
Sound, as is well known, if applied to both ears in equal intensity, is heard in both ears; but it will be found, if the intensity in respect to one ear be moderately yet decidedly increased, by bringing the sounding body nearer that ear than the other, or otherwise, as by the employment, in respect to one ear, as a damper or obstructor of sound, or in respect to the other ear, by the employment of some intensifier, or good collector or conductor of sound, the sound is heard in that ear only which is favoured and has the advantage of greater intensity.

There is little doubt that this law holds with regard to sounds passing through the air, and carried to the ear in the ordinary manner, without the aid of any mechanical contrivance, as for instance that of a watch placed in front of the face; but as the restriction of hearing to one ear, and its suppression in the other, admit of being rendered more obvious by an apparatus that shall collect sound, prevent its diffusion through the air, and carry it direct to the ear, I propose to give the result of experiments made with an instrument which I have invented for hearing with both ears respectively, and which, as it is specially adopted for the auscultation of differences in the sounds of different parts of the chest, I have named the Differential Stethoscope, or Stethophone.

The results thus procured will be more satisfactory than those obtained by ordinary audition; a sound will be increased as a visual object is magnified by the microscope, and as both ears are similarly dealt with, a perfect parity of conditions will hold in respect of both ears.

The differential stethophone (see figure) is simply an instrument consisting of two hearing tubes or trumpets, or Stethoscopes, provided with collecting cups, and ear-knobs, one for each ear respectively. The two tubes are, for convenience mechanically combined, but may be said to be acoustically separate, as care is taken that the sound once admitted into one tube, is not communicated to the other. The tubes are composed of two parts nearly equal in length, one near the ear knob, made of metal (C); while the other part, near the collecting cup, is made of metal wire (B), to impart flexibility. The ear-end is curved, so as to approach the ear, and is supplied with an ivory knob (D) for insertion into the *meatus externus*. The other end of the tube, being intended to collect sound, is supplied with a hollow cup, or receiver (A) made of wood, or some such material. The mechanical construction of this instrument is borrowed from the Stethoscope contrived by Dr. Caman of New York, and intended by its inventor for the purpose of hearing with both ears sounds emanating from *one* point, and collected into one cup. The two tubes are brought near together, a few inches in front of the face, by means of a connecting bar (E), but calculated to prevent the transmission of sound from one tube to the other. This bar is supplied with a joint, which permits the tubes to be freely moved, as is necessary in applying the knobs to the ears. The two knobs are kept steadily in the ears by means of an elastic band (F), connecting the two tubes near the bar, already described.

The instrument being fitted into the ears, with the knobs directed upwards, and the cup being applied equally near to, or upon a sounding body, say the inflating lung, or a watch, and the conditions for collecting sound being the same, the sound is heard with both ears, as in ordinary hearing. But if one cup be removed a little, say a half or quarter of an inch from the watch, (for we shall



now adopt it), and the other cup be left upon the watch, the sound is heard with that ear only which is connected with the cup placed upon the watch, and the sensation in the hearing ear is so marked, as to leave the mind in no doubt whatever that it is through that ear we become conscious of the sound. If the cup placed upon or nearer the watch be removed a little further than the other cup, so as to be less favourably situated for collecting sound, say one inch from the watch, the ear connected with it becomes totally unconscious of sound, and the sensation of hearing is most unequivocally felt in that ear, and in that ear only, which, but a moment before was utterly deaf to it. If one cup be placed upon the middle of the watch, and the other on the edge, the watch sound is heard in that ear only which is connected with the cup placed upon the *middle*.

These experiments may be thus varied, and the result will in reality be the same, though apparently more remarkable. The watch, being held in the air, at the distance of about an inch from one ear, is heard distinctly beating with that ear only; but if the watch be now connected with the collecting cup of the tube of the stethophone, inserted into the other ear, the sound being greatly magnified, is heard in this ear, and in it only, the ear in which the sound had been primarily heard, being now altogether insensible to it, or unaffected by it as far as our consciousness is concerned. The sensation of sound is transferred from one ear to the other, although the watch is allowed to remain in close proximity to the ear that is now deaf to its sound.

A watch placed upon, or inside the cheek, is heard to beat in that ear which is nearer; but if the opposite ear be connected with it by means of one of the arms of the stethophone, or by a common flexible stethoscope, the watch sound is no longer heard in the ear nearer the watch, but in the ear further from it, which is now in reality brought into nearer connexion with it, by means of the hollow tubes.

Sounds, produced in whatever material, are alike subject to this law, so far as my experiments have yet been made.

The medium in which sounds are produced does not alter this law. A watch ticking, or a bell ringing, either in the air or under water, affords the same results.

Sounding bodies give the same results when covered with soft or hard materials. A watch placed in one corner of a box, a few inches square, and an inch deep, is heard to beat in that arm of the stethophone only which is near to it. By this means, and by successive movements of the instrument, and by attending to degrees of intensity, the exact position of the watch may be with certainty indicated. Or this may be effected by successively excluding those parts which fail to cause hearing in one of the ears.

The interposition of a body calculated to obstruct the sound at its entrance into one of the cups of the stethophone, causes the sound to be heard in that ear only which is connected with the cup which remains free from obstruction. This admits of ready proof, by applying the two cups as much as possible equally on the middle of a watch, about an inch above it, and by placing two fingers held together between one cup and the watch; when this is done, the watch is heard to tick into the ear that remains free from obstruction.

The removal of an obstructing body from one cup, while it is allowed to remain in operation with the other, causes sound which had been equally heard with both ears, to be heard in that one only which is connected with the cup freed from the obstructing body. Thus, if the fingers be interposed between the watch and the cups held equally over it, and the finger be separated under one of the cups, so as to permit of atmospheric communication, the sound is heard in that ear only which is connected with this cup, and not at all in the other.

The effect of intensification of sound in one ear depriving the other of all sensation of that sound, is interestingly shewn by placing the tubes of the instrument across a block of wood, with the cups hanging in the air. While both cups are left open, and a tuning fork in vibration is placed between the two tubes, the sound is heard with both ears; but if one cup be closed with the hand, or with leather, and the other be left open, the sensation of sound is restricted to that ear connected with the closed cup. The sound in the tube connected with the closed cup is rendered more intense by the closure, the escape of sound is obstructed, and reverberation takes place. By virtue of the intensification, sensation is monopolized by one ear, and is lost by the other. The result and the mechanical conditions are much the same as in the experiments by Mr. Wheatstone with a tuning-fork held upon the head, presently to be referred to.

It is worthy of observation, that in order that a sound previously heard with, or in both ears, as in the above experiments, may be appreciated or felt in one ear only, it is not necessary that the stethophone, or other conducting instrument, be placed in the cavity of the *meatus externus*. It is sufficient for this result that the instrument be placed near the meatus, so as to give it an advantage of intensity over the opposite cavity. When the instrument is to be held only near the meatus, care should be taken not to touch the external ear, so that there may be no conduction by that part from contact, which would vitiate the experiment. The result is perfectly satisfactory and conclusive, although the remarkable sensation of *pouring in* of sound into the ear, is less marked, a fact sufficiently intelligible from the diffusion of sound which must take place outside the ear, when the extremity of the tube is held there, and is not inserted into the meatus. It is therefore obvious that the restriction of hearing to one ear, under the conditions specified, is not due to closure of the *meatus externus* the cause of the augmentation of sound in some experiments of Mr. Wheatstone, to be shortly referred to.

The remarkable phenomenon of the restriction of hearing to one ear, above described, seems not to be without important signification. It holds apparently in virtue of a law seemingly established for the purpose of enabling man and the lower animals to determine the direction of the same sound, with more accuracy than could be done, had a judgment to be formed between the intensity of two similar sensations in the two ears respectively. All source of error is removed by there being only one sensation, although there may be two impressions. This law of a stronger impression in one ear, rendering us unconscious of a weaker but similar impression in the other, has an analogue, though per-

haps an imperfect one, in the sense of touch. Very strong impressions upon one part of the body, cause such acute sensations, that minor impressions of the same kind upon another part are frequently not felt, in fact produce no sensation.

The only observations bearing upon this law which I have been able to discover, are some by Mr. Wheatstone, in a paper entitled, "Experiments on Audition," published in the "Quarterly Journal of Science, Art and Literature," vol. ii, new series, 1827. These experiments are intended to shew the augmentation which the sensation of autophonic sound, and the sound of a tuning-fork applied to the head, acquires when the ear is closed, although the perception of external sound is diminished. Mr. Wheatstone shews that a vocal sound is heard longer in that ear that is closed say with the finger, than in the other. He also shows, that the sound of a tuning-fork placed upon the head, is heard louder in that ear which is closed than in the other which remains open, even though the tuning-fork may be brought nearer the open ear than the closed one. These experiments, Mr. Wheatstone says, prove that "sounds *immediately* communicated to the closed *meatus externus*, are very greatly magnified," and he adds, "it is an obvious inference, that if external sounds can be communicated to act on the cavity in a similar manner, they must receive a corresponding augmentation.

This distinguished philosopher constructed the instrument named a Microphone, for the purpose of augmenting weak sounds upon this principle, i. e. the augmentation of sound by closure of the ears; and he informs us that, it "is calculated for hearing sounds when it is in *immediate* contact with sonorous bodies," and that "when they are diffused by their transmission through the air, this instrument will not afford the slightest assistance." This instrument is spoken of in connection with the augmentation of sound, and not in reference to the limitation of sound to one ear, or to the comparison of sensation in the two ears. The remarkable, and, to the uninitiated mind, wonderful fact made known more than thirty years ago by Mr. Wheatstone, that a tuning fork held upon the head close to an open ear, is not heard in that ear, but in the opposite ear, provided it be closed with the finger, or by some other means, proved that sounds communicated to the skull were exclusively heard in the closed ear. In the case of the tuning fork, the fact made known by Mr. Wheatstone is undoubted. The rationale of the phenomenon appears to be this:—The vibrations of the tuning fork are communicated to the bones of the head, and through them to the ears, including their bones, cartilages, contained air, but in the case of the closed ear, the vibrations are permitted no egress or escape as in the open ear; reverberations take place, and the consequence is, that the sound is not duly moderated; and in virtue of the law I have just enunciated, the sensation of sound is restricted to the closed ear. When the tuning-fork, duly sounding, is held in the air, and not connected directly with the head, the closed ear remains insensible to it, and the sound is heard exclusively in the open ear.

Mr. Wheatstone's interesting operation relates to a head-sound not duly moderated, as in the opposite and open ear, and virtually more intense, and comes within the general law advanced in this paper, which embraces all sound, whether

internal or external, viz., that a sound of the same character in the presence of both ears, if conveyed by any means to one ear, or to the nerve of that ear, more intensely than to the other, is heard in the more favoured ear only.

It seems necessary, in Mr. Wheatstone's experiments, that the bones of the head should vibrate freely; weak sounds, such as gentle blowing, will not succeed; and if the tuning-fork be placed immediately under the open ear, and passed upon the soft parts, little fitted for vibration, between the mastoid process of the temporal bone and the lower jaw, the sound is heard in this ear, and not in the closed ear.

It may perhaps be well before proceeding further, to acknowledge that I am well aware it has been long known that a very loud sound conveyed into one ear will render the other insensible to sound of a weak or low character. But the phenomenon which I have ventured to bring under the consideration of the Royal Society differs from the well known and readily admitted fact in this important particular, that no very great loudness is required, and that no very great augmentation of sound in one ear over that in the other is necessary in order to restrict the sense of hearing to one ear, and to deprive the less favoured ear of the sense of hearing which it had previously enjoyed. A moderate, yet a decided increase of intensity is all that is required to remove the sense of hearing from the less favoured ear, and to cause the more favoured organ to be alone sensible to the sound.

When sound is proceeding into the two ears, but in consequence of its reaching one ear in greater intensity than the other is heard only in one ear, the sensation of hearing in the favoured ear, though strictly limited to it, is augmented by the sound entering the less favoured ear, although it entirely fails to cause a sensation there, or to produce a consciousness of sound in that organ. The more sound collected by the less favoured ear, as long as the amount is less than that conveyed to the other ear, the more the sensation of sound is augmented in the more favoured ear. The intensity of sensation in the more favoured ear increases in a ratio with the increase of sound in the less favoured ear, until the intensity of sound is the same or nearly the same, in both ears, when the sensation experienced is the ordinary one of hearing with both ears.

This fact admits of satisfactory proof in this way:—A watch is placed on a table equidistant from both ears. The stethophone is applied to the ears; one cup is placed within an inch of the watch, while the other is turned away from it, at the distance of some inches. As the further cup is brought nearer and nearer the watch, the sound, *always* confined to the more favoured ear, is gradually and steadily intensified, until the two cups are, or are about to be, similarly placed, at which moment the sensation ceases to be restricted to one ear, and has acquired its greatest intensity.

This fact proves, that though the sensation of hearing be confined to the ear to which sound is communicated with greater intensity, we profit by the sound which is conveyed into the other ear, though failing to produce a sensation or a consciousness of sound there, by its serving to augment very materially the sensation of sound in the more favoured ear. The less favoured ear thus augments the sensation which we experience, at the same time that it fails to inter-

tere with the aid which the sensation confined to one ear affords us, as to the direction of external sounds.

The sounds of which we have been treating as differently affecting the two ears, according to the intensity with which they are respectively communicated are of the same character, though differing in intensity. It is sounds of the same character only which exhibit the phenomenon of restriction in virtue of moderately different intensity. The sounds must emanate from the same sounding body, or from bodies sounding similarly. A little difference in character will cause the experiment of restriction to fail.

Thus if two bells, differing considerably in character, be rung respectively in the two ears, one louder and graver than the other, the louder and graver sound does not render the other ear insensible to the weaker sound of the weaker bell. Both ears hear perfectly, but the loud, grave sound is heard in one ear, and the weak sound is heard in the other.

If, instead of one watch, we place two together, having sounds of different character, as for instance one low and grave, the other loud and sharp, and the two arms of the stethophone be placed over them respectively, the sounds of both watches are heard, but the sound of one is heard in one ear, and the sound of the other is heard in the other ear. The loudness of the sound in one ear does not increase the weakness of the sound in the other; or, in other words, the intensity of the sensation produced by the weak watch in the one ear, is not reduced by the sensation produced by the loud watch in the other ear.

The sound of a watch ticking continues to be heard in one ear, although a large sized bell is made to ring at the other; and I have not perceived that the sensation produced by the watch is at all impaired by the bell. A whistling, lung-sound heard in one ear, is not rendered less obvious by a loud, blowing lung-sound in the other. A hissing murmur at the apex of the heart conveyed into one ear, and a rasping sound at the base conveyed into the other, are both heard without alteration in the ears to which they are respectively conveyed.

By virtue of these two laws, 1st, That sounds of the same character are restricted to that ear into which they are conveyed in greater intensity, and 2nd, That sounds differing in character may be heard at the same time in the two ears respectively, even if they be made to reach the ears in different degrees of intensity; it is possible to analyse a compound sound, or one composed of two sounds, and to divide it into its component parts. In order to effect a division of a compound sound, it is only necessary that the two sounds of which it is composed may respectively be heard at certain points, in greater or lesser intensity, and that the respective cups of the stethophone be placed at these points. The ear connected with the cup, placed where one half of the sound is in greater intensity, hears that half sound only, and the ear connected with the cup placed where the other half of the sound is in greater intensity, hears that half sound only. The sound is divided into two parts, the one is heard in one ear, and the other part in the other ear. For example, the compound sound composed of the two sounds of the two watches placed together upon a table, with the unassisted ear is distinctly heard in its compound state, and cannot be divided into its two constituent parts. With the stethophone this is readily done. One cup is placed

where the sounds of one watch is in greater intensity, and the other is placed where the sound of the other watch is in greater intensity, and the result is obtained of one watch only ticking in one ear, and of the other watch only ticking in the other ear. The greater intensity of each watch-sound in one ear has rendered all hearing of it in the other ear impossible, and as each watch-sound in its greater intensity is conveyed to different ears, one is heard in one ear only, while the other is heard in the other ear only. Without the stethophone, or some such instrument, this analysis could not be made; the ordinary stethoscope will not succeed, for wherever it is placed it conveys the mixed or compound sound to the ear. If the naked ear be applied over and upon the watches, the same result follows, and it is the same if instead of two arms of the stethophone we employ only one. This remarkable separation of the components of a sound may be effected also when the sounding bodies are enclosed in a box capable of transmitting sound, or when separated from us by the interposition of materials capable of conducting sound, and by successive trials and comparisons of intensity at different places, and by a process of exclusion of those parts which fail to cause sensation, the respective positions of two adjacent sounding bodies may be predicated. If, for example, we have two watches, A and B, enclosed in a box, and through one cup A, we hear watch A, and with the other cup B, we hear watch B, we may conclude that cup A is nearer watch A, than cup B is, and so on. In the same manner we may auscultate the morbid sounds of the heart. By cup A, placed at the apex, and cup B, placed at the base, we hear separately the morbid sounds of the two parts; for example, a blowing murmur at the apex in one ear, and a rasping murmur at the base in the other ear. This we are enabled to do, although at any intermediate point with the single ear, either with or without a stethoscope, we hear the conjoined two sounds. It is obvious, that with the stethophone we not only succeed in separating sound, but that this instrument or some similar contrivance, affords the only possible means of hearing with two ears at once, sounds emanating from the same region or surface, for the sides of the head can be applied, of course, to the same sounding surface only in turn or succession. With this instrument we, as it were, place our ears in our hands, apply them where we choose, and listen with them both at adjacent or distant parts of the same surface, at one and the same instant of time.

It is not unlikely that the property which the stethophone possesses of pointing out with precision where sound is most intense, may be very usefully employed. It seems possible that it might be turned to account in discovering the points where operations in military mining may be going on.

It is, however, in the practice of medicine only that the differential stethophone has been hitherto applied, and it may be here permitted to me to point to some of the chief purposes for which it is adapted, and for which it has been employed.

In respect to respiration, we may compare at once, and without the inconvenience of moving the head, or the ordinary stethoscope, from place to place, the extent of the respiratory sounds in different parts, so that a very minute difference, an excess in one part, or a deficiency in another, may with certainty be

discovered. Differences in quality, such as softness, or roughness, are readily recognized. The increased length and loudness in one part is accurately contrasted with the healthy condition of another part. In cases where the inspiration has been very full in one place, in order to compensate for deficiency in another place, and where the respiration was long and coarse in the deficient part, I have heard the inspiratory sound only in one ear, and the expiratory sound in the other ear. The sounds were respectively restricted to the two parts, and they alternated in a very marked manner. One part has remained silent, while the other has been heard to sound, and this has been silenced when the other has awoke the ear.

This diagram represents the sounds occurring alternately in two sides of the chest in a consumptive patient. The dark spots represent the sounds.

Healthy right side of Chest.

Unhealthy left side of Chest.

<i>Inspir I.</i>	■	<i>Inspir I.</i>
<i>Exspir I.</i>		<i>Exspir I.</i>
<i>Inspir II.</i>	■	<i>Inspir II.</i>
<i>Exspir II.</i>		<i>Exspir II.</i>

The influence which the acts of respiration exert in heightening and lower-murmurings in veins, say of the neck, in persons affected with a thin and watery condition of the blood, is well exhibited by placing one arm of the stethophone on the chest, and the other upon the veins.

When the respiration is alike in character, but decidedly louder in one part than in another, the sound in the weak side is lost. While this loss proves, in a very emphatic manner, the important fact of a deficiency, it of course, deprives us for a time, of the opportunity of judging of the quality of the deficient respiration, but this is readily obviated by removing the cup of the instrument from the full respiring part, and then the deficient respiration is immediately heard through the other cup. Thus while the two sounds being of like character, and one being more intense than the other, can be heard only in one ear at the same time, an admirable opportunity is obtained for contrasting the extent, and some of the qualities, of the sounds of the two parts, by placing the cups alternately and rapidly upon the two spots respectively. Vocal extussive resonance in two parts of the thorax, is well contrasted with the two tubes employed at once, or in immediate succession.

The sounds of the two sides of the heart, and of the valves of the two great arteries proceeding from that organ, are, by means of the stethophone, very advantageously dealt with. By placing it over the two sides of the heart, or the origin of the two arteries, we ascertain the character and loudness of the sounds of these parts. One cup being placed over the aorta, and the other over the pulmonary artery, if the sounds they collect differ in character, one sound is heard in one ear, and another in the other ear. We may have at the same moment an aortic murmur and a healthy pulmonary artery sound, one sound in one ear, and another sound in the other ear. But when it is desired to listen to each sound simply and in succession, the instrument will still be available, for

the cups may be applied singly and in succession, thus affording ample means for contrast.

In cases of disordered heart, in which it is desired to discover whether the sounds of the two sides of the heart are synchronous, the stethophone affords the most satisfactory mode of investigating the fact. With it, we virtually place our two ears over the two sides of the heart; and if one side sounds at all after the other, the fact is made known, and the end of one sound and the beginning of the other are clearly and distinctly defined. With the ordinary stethoscope this is impossible; for where one sound is heard the other may be inaudible, and long before the head or stethoscope can be adjusted at another part, the second sound has taken place, and is long since over.

In conclusion, I may perhaps be permitted to say, that the differential stethophone proves a great auxiliary in examining the heart with the cardioscope or sphygmoscope, which I had the honour to exhibit to this society two years ago. While the latter instrument exhibits the movements of the heart, the stethophone informs us of their sounds, in a more complete manner than can be otherwise effected; and from the stethophone permitting of auscultating two parts at once, and with the eyes directed by the chest, the relation of the movements and of the sounds, normal or abnormal, of this most important organ is very fully and satisfactorily made out.

POSTSCRIPT. Received April, 22 1858. In connection with that part of my paper which treats of the restriction of hearing to the closed ear, I desire to add the fact which I have ascertained within the last few days, that if one ear be closed wholly or partially at its external part i. e. at the meatus externus, by disease or by congenital malformation, while the the other ear is healthy, the sound of the tuning-fork, applied to any part of the head, is heard only in the closed ear. This fact holds, although the closed ear is totally unaffected by sounds conveyed through the external air.

I have further to mention the fact, that all persons deaf in one ear, whom I have lately examined, with one exception, hear the sound of the tuning-fork applied to the head in that ear only that is deaf to external sounds. A man who has been totally deaf in one ear for thirty years, in consequence of a violent blow upon the head, had the tuning-fork applied over the forehead. He started, and said that he heard only in the ear which had been deaf during that long course of time. In such cases I have been disposed to believe that, amidst other lesions of the organ of hearing, there may be present an obstruction or closure, that a reverberation takes place, and that thus a restriction of hearing is secured for the diseased organ."

PLACE D'ARMES,

Quebec, 10th July, 1860.

ART. XLI.—*Case of Angina Pectoris, terminating fatally, with structural change in the heart and aorta.* BY FRANCIS WAYLAND CAMPBELL, M.D.
Licentiate of the College of Physicians and Surgeons, Lower Canada.

On the 4th of July last, I was sent for in great haste to visit James S—— a colourer and whitewasher, aged 54, who, I was informed, shortly after taking a hearty dinner, was seized with a violent pain in the region of the stomach. When I arrived at his dwelling, I found that the pain had entirely disappeared, and he was comparatively well. His bowels being torpid, I ordered Pil. Hyd. gr. ij. to be taken at bed time, and a seidlitz powder in the morning, and left instructions that should the pain again trouble him, to apply a sinapism over the affected region. On the following day I again visited him, and was informed that twice during the night he had had a paroxysm of pain which the sinapism failed to relieve. Having made minute enquiries into the man's habits, I found that he indulged rather freely in liquor; this, with the fact that the two attacks he suffered from during the night were accompanied by a desire to vomit, led me to order a blister over the epigastrium. On the 6th of July, when I saw him, he said that he felt rather better, the blister having lessened the frequency and intensity of the paroxysms. On the 7th, he was, to use his own expression, "much worse," having had this morning two severe paroxysms. This time he referred the seat of pain to the region of the heart, and described it as agony the most intense, rendering him almost unable to breathe. It came on suddenly shooting to the back of the neck—then down both arms—lasting about twenty minutes, and gradually passing off. Clearly I had a case of Angina Pectoris. I examined the Cardiac region, and detected a faint and almost imperceptible murmur with the first sound of the heart, only to be detected by the closest attention. I prescribed Pulv. Ipecac. Co. gr. xv. to be taken every four hours, and a table spoonful of the following mixture every two hours: ℞: Spt. Eth. Sulph. Co., Spt. Ammon. Arom. àà ℥ ss. Tinct. Hyosciam. ʒ iij. Aquæ ℥ vj. On the morning of the 8th, he walked to my surgery and asked me to repeat the powders, as they had done him a great amount of good; said he felt much better. Had during the previous night only one paroxysm, which was mild in character compared to those which preceeded.

9th July. Visited him about noon. Feels himself improving, and is in much better spirit. Wished to go out to attend to some business which I forbade. Same medicines continued. About half-past seven o'clock, that evening, contrary to instructions, he attempted to cross the street to a neighbour's house when he was seized by a severer paroxysm than any of the preceeding, so much so that he was unable to return home without assistance. As he was thought to be dying, I was sent for in great haste. I found him trembling violently, and his body covered with cold perspiration. The pulse was small and frequent, and the countenance exhibited extreme anxiety. I ordered a little brandy and to continue the medicine as before. About 9 o'clock that evening I saw him with Dr. Craik in consultation, when matters were found much as reported on the 7th. While we were in the room, however, a paroxysm came on, and on placing the stethoscope over the heart, a very and systolic murmur was heard, and

also a very distinct and harsh diastolic bruit; both these sounds were heard over the aortic valves, but were inaudible at the apex. All previous medicines stopped, and the following ordered R. Tinct. Valerian. Ammon. ʒvj., Spt. Eth. Sulph. Co. ʒss., Tinct. Opii ʒij., Aquæ ʒvj. A table spoonful to be taken every three hours. It was determined to try the hypodermic injection should we again find him in a paroxysm.

10th July. This morning, feels rather easier. There has not been any paroxysm during the night. Still to continue medicine. Bowels being costive, he was ordered Ol. crotonis gtt. ij. S.S.

11th. This morning I found that he had been attacked with a paroxysm a few minutes before I arrived. The physical signs were precisely as noted on the evening of the 9th. I injected xx gtt. of Liqueur Opii Sedativus (Batteley's), and vii gtt. of Tilden's fluid Extract of Belladonna, hypodermically, which failed to give any relief or affect him in the slightest, and the paroxysm passed off as previously.

12th. Dr. Craik met me in consultation to-day. Has had several severe attacks since last visit. We felt inclined again to try the effect of the hypodermic injection—but he positively refused to submit. He begged of us to cup him, which I accordingly did, and obtained about six ounces of blood. Prescriptions continued as before.

13th. Says that he has found more relief from the cupping than from anything else. Asked to have it repeated, which was done.

14th. Felt so well this morning that it was with difficulty his wife could persuade him to remain at home.

15th. (Sunday) on making my visit to-day I found that about 10 o'clock he had had a slight attack, which he attributed to some over-exertion he had made early in the morning. Examined his chest, and found things as before. Visited him at 8, p. m.; found him sitting chatting with some friends; felt quite well; has had no attack since morning.

16th. About three o'clock this morning he suddenly awoke his wife, saying, "another attack." He then called for his medicine. She got up, lit a candle, despatched a messenger for me, and brought the bottle to him. He raised his head to take some of it, when suddenly he placed his hand over his heart—his head fell back, and, without a struggle, he died.

AUTOPSY.—A post-mortem examination was made at four o'clock this afternoon, being about thirteen hours after death. The countenance was tranquil, and the cadaveric rigidity extreme. The heart was considerably enlarged and fatty. On the surface were two milky patches, about an inch in diameter, and each of the cavities contained a small quantity of fluid blood. The mitral and tri-cuspid valves were healthy, but on proceeding to examine the state of the aortic valves, the "fons et origo mali" was discovered. On the free surface of these valves there was ossific matter deposited, as well as upon the whole surface of the arch, rendering the parts rough and gritty to the finger. At the aorta, between two of the valves, was a triangular spot about three-eighths of an inch in diameter, which projected to the extent of one-tenth of an inch into the calibre of the artery, and no doubt contributed to cause the murmur which had been noticed

before death. No other lesion of the heart was discovered, and all the other organs were healthy, with the exception of the liver, which was considerably enlarged.

REMARKS.

This case of Angina Pectoris is interesting in the rapid manner in which it proved fatal. Previous to the time of my being called to attend him, he enjoyed remarkably good health, for a period of at least twenty years, not having a bodily ache of any kind. It is seldom that a first attack proves fatal—indeed it is generally after the lapse of some months, sometimes years, that the patient succumbs. A case is recorded by Stokes where the patient suffered for ten years from aggravated symptoms of Angina Pectoris. The quick succession of attacks that this man suffered from, was another peculiarity in the case, while no exciting cause could possibly be ascertained. The remote or predisposing cause of Angina is as yet shrouded in mystery, but there seems to be sufficient evidence for the conclusion that true angina never occurs without organic disease of the heart or the arteries in its vicinity. It is true that cases have been recorded in which no traces of organic disease were observed, but of such cases Dr. Stokes remarks that “it is more probable that in the cases so described the disease was overlooked, than that the heart was perfectly sound.” He goes on to say “that such cases as were observed before the application of the microscope to pathological anatomy may be set aside, as proving the existence of angina without organic change; for among the most important uses of histological research is the discovery of those early stages of organic change which escape the unassisted eye.” Dr. Walshe, on the same subject, says: “It has occurred to me to examine, during life, some six or eight cases of true angina; in every one there were signs of organic disease. I have opened, or seen opened, the bodies of three persons destroyed in the paroxysm; the heart was texturally affected in all.”

The forms of organic disease present in different cases seem to be very various, and have been enumerated by Dr. Latham as follows: 1st. Weakness and attenuation. 2nd. Weakness with fatty degeneration. 3rd. Some form of valvular disease, generally affecting the left side. 4th. Disease of the aorta, with or without obstruction of the coronary arteries. Nearly every known disease of the heart and arteries may be included in one or other of the above classes, and have been found associated with angina. But all these diseases often exist, and prove fatal, without any symptom of angina—therefore, as Walshe remarks, “as angina occurs with all varieties of heart disease, and may be absent with all, the conclusion is unavoidable that there is something beyond organic mischief concerned in generating the paroxysm.” What this something is, has not been decided. The suddenness of the advent and cessation of the paroxysm, and the perfect ease in the interval seem to ally it to the nervous group. Walshe, with Latham and others, look upon the paroxysm as spasmodic or neuralgic in character, while Stokes, with Parry, consider the pathological condition during the paroxysm to be a diminution of the muscular power of the heart. There are not wanting many and strong arguments on both sides, but the latter view seems to be most strongly supported by facts. Thus females—notoriously more liable to spasmodic diseases than males—enjoy almost a complete immunity from the

disease. It nearly always occurs as in the present instance, in men above the age of fifty and of a leuco-phlegmatic habit of body, and there is no evidence of the heart ever having been found after death from a paroxysm of "angina," in a spasmodically contracted condition, although this condition has been found after death from other causes—as, tetanus, or decapitation. In the present case, the heart, so far from being in a spasmodically contracted state, was more flaccid than usual, and contained blood in all its cavities, although the muscular system generally, was in a state of extreme rigidity. The walls of the organ were attenuated and in a state of fatty degeneration, two conditions not at all favorable to spasm, but eminently so, to failure of muscular power. The symptoms of angina are as readily explained on this hypothesis, as on the other, for the pain may be due to the distension of the heart and large veins; indeed, the increased volume of the heart more readily accounts for the pain shooting along the arms, from pressure upon the nerves, than any phenomena connected with spasm.

What part, if any, the ossific deposits, on and around the aortic valves, played in the production of the most serious symptoms, I shall not attempt to determine. Suffice it to say that they account for the bruits, both systolic and diastolic, in the former case by the friction of the blood over the rough surface, and in the latter by regurgitation consequent upon imperfect closure of the valves.

The difference of opinion respecting the condition of the heart during a paroxysm, might well be overlooked, were it not likely to influence the treatment; but as the treatment of spasm differs materially from that of debility—the disputed point becomes of some importance. If, for instance, the spasmodic view be adopted, the great remedy ought to be found in chloroform—but I have been unable to find any recorded cases in which its administration has been attended with benefit, while on the contrary, Dr. Stokes mentions a case of intercostal neuralgia, in which the external application of chloroform produced convulsions and collapse, which lasted for many hours. Adopting the other view of the pathology of the disease, the remedies indicated will be such as already have been found most beneficial, viz: opium and other stimulants, together with the careful avoidance of all depressing agencies, such as over-exertion of mind or body, ebullitions of temper, sudden surprises, &c., &c. The treatment, of course, can be only palliative, for the constant concurrence of organic disease precludes the possibility of a permanent cure.

Place d'Armes, Montreal, Aug. 2nd, 1860.

PHYSICAL DEPARTMENT.

ART. XLII.—*Discovery of an ancient burial ground in the neighbourhood of Hull.* BY EDWARD VAN COURTLANDT, M.R.C.S.L. *Ottawa.*

Conceiving that any information which is calculated to throw light upon the habits and manners of the aborigines of Canada would not prove uninteresting to your readers, I am induced to forward the accompanying communication to

your valuable journal as it does not profess to be purely medical, hoping thereby to induce other parties residing in the Valley of the Ottawa, and who have had superior opportunities for archæological pursuits, to give the public the advantage of their researches.

On June 21st a gentleman apprized me of several Indian skeletons having been that morning accidentally discovered at the Hull landing, and I lost no time in repairing with him to the spot. It proved to be a detached portion of the same burial place which I visited and examined some years since, and an account of which will be found in the first volume of the *Canadian Journal of Science*. When the work of digging was fairly begun, every eye was directed to the upturned sand in quest of archæological specimens, with what result will be seen.

After meeting with the remains of a few detached skeletons, we came to what appeared one common pit, where several bodies, both of adults and children, had been miscellaneously thrown. Some of them had evidently been placed there in a doubled up or cross-legged posture. The everted heads of the Femurs from their glenoid cavities, and the cruciform position of the Tibiæ shewed this clearly and unmistakably. Except with the Iliæ, some of the large long bones, the petrous portion of the temporal bones, some lower jaws, and a number of patellæ, all the others, especially the crania, some of which were of unexampled thickness, crumbled into dust on exposure to the atmosphere. In many instances the bones were found very thickly coated with red iron ore, with which material it is well known the chiefs amongst the aborigines were in the habit of being bedaubed, both during life and after death. Another and smaller pit was then found, the sand of which was of a jet black colour; which anomaly, however, was soon accounted for by discovering sundry fragments of charred human bones—conclusive evidence that the aborigines of the country were in the habit of resorting to human cremation, whether of a living enemy or a deceased kinsman. I was fortunate enough to obtain the perfect cranium of one dog, together with the lower jaw (the teeth being quite perfect, and almost complete in both,) five large tusks, proper to the upper jaw of the bear, together with a portion of one left ramus of the lower jaw, and a few other detached portions of the skull of the same animal, and the scapula and one molar tooth of a beaver. The only weapons and implements found were one flint spear-head, a most primitive dagger, 12 inches long, and a fish spear, both composed of bone, and in excellent preservation. A large piece of extremely lustrous mica, which evidently had served the purpose of a breast ornament, was found amongst the spoils; but no pipes or cooking utensils of any description were met with.

Inferring from the extremely and uniformly perfect condition of the teeth, there can be no doubt that these interesting specimens date back to a period long antecedent to the white man's visit, and to the introduction of salt pork and alcohol, which two baneful agents have done more towards the extermination of the primitive red-skinned denizens of the forest than have the combined influences of war, pestilence and famine.

Ottawa, July 20 1860.

ART XLII.—On the Eclipse of the Sun of July 18th, 1860, from observations taken at St. Martin, Isle Jesus, Canada—Lat. $45^{\circ} 32'$ North, Long. $73^{\circ} 36'$ West: 118 feet above the level of the sea. BY CHARLES SMALLWOOD, M. D., L.L.D., St. Martin.

As seen by the geographical co-ordinates of the place, the obscuration was only partial, and south of the line of the total eclipse. The first contact occurred at 7 hours 10 minutes, mean time, at a little west of the sun's northern limb (direct view). The sky at 6 A. M., was somewhat clouded by *Cumulus* clouds which soon cleared away and left the first contact visible. A few *cumulus* clouds passed over the disc at 7.30, and a few *Stratus* clouds were seen in the north east; near the horizon, the line of contact was sharp and well-defined. The inferior cusp at one time seemed somewhat "straightened," or as it were elongated backwards but sharp. The sun's disc presented several spots, one of a large size, which had been visible for some days. The moon's shadow passed directly over this and a smaller spot. There was no apparent "bluntness" at the cusp, nor were the edges "jagged" or serrated at any time. The surface of the moon appeared very dark in contrast with the bright disc of the sun. A "haziness" was observed on the outer edge of the sun; the last contact was very distinct and was south of the sun's eastern limb.

The usual 6 o'clock morning observation is thus recorded:—Barometer 29.826 inches; temperature of the air $62^{\circ} 3$; minimum temperature during the night $58^{\circ} 6$; lowest point of terrestrial radiation $47^{\circ} 8$; wind S. S. W., calm; *cirro cumulus* clouds 0.6; ozoneometer indicated 0.2; Volta's electrometer marked 1° negative. Intensity of the sun's rays $63^{\circ} 4$ (sun somewhat clouded); Aurora Borealis visible during the night.

The following tables have been compiled to show the state of the atmosphere during the Eclipse.

Table showing the Hygrometrical State of the Air:—

St. Martin's Mean Time. 18th July, 1860.	Gaseous Pressure of the Atmosp're.	Dew Point. Degrees.	Electric Force of Vapour.	Weight of Vapour in a cubic foot of air.	Degree of Humidity, Saturation 1,000.
h. m.	Inches.		Inches.	Grains.	
7 0 a.m.	29.409	$55^{\circ} 2$	0.445	4.99	0.798 Cloudy
7 10 "	.416	$55^{\circ} 8$	0.425	4.72	0.711 1st contact
7 15 "	.416	$53^{\circ} 8$	0.425	4.72	0.687
7 30 "	.436	$52^{\circ} 2$	0.402	4.47	0.651 Cumuli
7 40 "	.428	$53^{\circ} 8$	0.425	4.72	0.687 Light Cirr
8 00 "	.447	$54^{\circ} 1$	0.430	4.67	0.652
8 10 "	.405	$56^{\circ} 4$	0.464	5.14	0.726
8 13 "	.384	$57^{\circ} 2$	0.476	5.31	0.798 Great'st obscr't'n
8 30 "	.362	$56^{\circ} 4$	0.464	5.14	0.726
8 45 "	.340	$58^{\circ} 2$	0.494	5.39	0.731
9 00 "	.398	$56^{\circ} 2$	0.461	5.09	0.657
9 15 "	.353	$58^{\circ} 0$	0.489	5.38	0.672
9 20 "	.344	$58^{\circ} 9$	0.591	5.46	0.620 Last contact

This table shows the increase of vapour and humidity during the eclipse. Its gradual increase and diminution is very perceptible up to the time of the greatest obscuration.

TABLE showing the Atmospheric Pressure, and also the Temperature, as well as the degree of Radiation:—

St. Martin's Mean Time. 18th July, 1860.	Barometer Reduced to 32 F.	Temperature of the Air. F.	Intensity of the Sun's Rays.	Degree of Terrestrial Radiation.
h. m.	Inches.			
7 00 a.m.	29.854	62° 7	81° 3	54° 0 Cloudy
7 10 "	.841	64° 7	90° 3	Clear. 1st contact
7 15 "	.841	65° 0	87° 3	
7 30 "	.838	65° 3	87° 1	52° 7 Cumuli
7 40 "	.853	65° 0	86° 0	52° 5 Light Cirri
8 00 "	.877	66° 0	84° 2	
8 10 "	.869	66° 0	78° 4	Greatest obscuration
8 13 "	.860	63° 0	77° 4	57° 0
8 30 "	.826	66° 2	78° 0	57° 0
8 45 "	.834	67° 0	82° 4	60° 0
9 00 "	.859	69° 0	86° 4	62° 5
9 15 "	.842	70° 3	94° 2	
9 20 "	.845	71° 1	95° 2	— Last contact

This table shows the decrease of temperature of the air, and also the decrease in the intensity of the sun's rays. The lowest reading of the barometer occurred 17 minutes after the greatest obscuration.

The lowest Temperature as might be expected occurred at the moment of greatest obscuration.

Polarimeter.—Nothing unusual could be detected either in the intensity of the sky polarization, or in the normal angle, compared with observations made some days previous; the zenith was quite free from clouds during the whole period of the eclipse.

Solar Spectrum.—The solar spectrum showed nothing either in extent or definition from its usual appearance. An apparatus erected for the purpose of examining Herr Fraunhofer's black lines in the spectrum, was used both with direct and reflected light, and indicated nothing more than a slight faintness or nebulous appearance in the red end of the solar spectrum. The lines were well shewn in the other coloured rays. An upright staff showed no "flickerings" or "wavering" in its shadow.

Photometric Scale.—Sensitive paper prepared and exposed successively for a given period of time, gave very positive and interesting results, the shades varying considerably during the increase and decrease of the partial covering of the solar disc. Chromotype paper also furnished similar results from given periods of exposure. Our very clever photographic artist, Mr. Notman, of Montreal, who by my desire obtained and to whom I am indebted for photographs of the eclipse, found similar results.

The Ozoneometer exhibited no sensible difference.

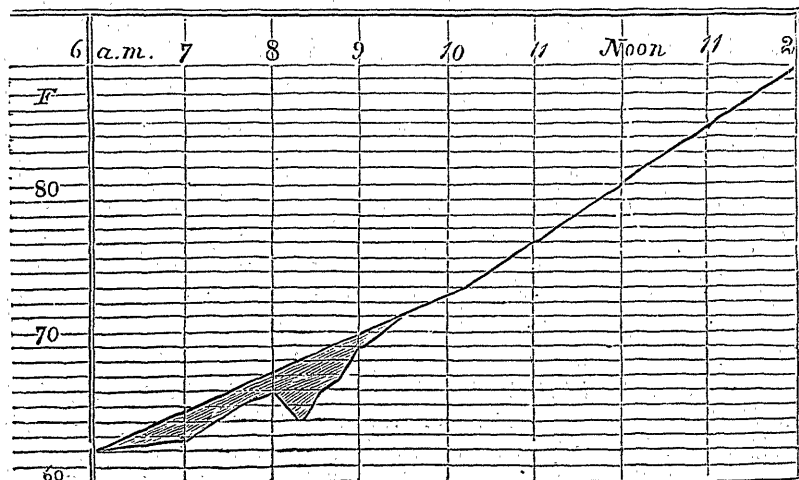
Atmospheric Electricity.—The electrometer at 10 p. m. of the 17th day, showed Volts No. 1, 4°, negative, and at 7 a. m. on the 18th day, indicated only 1° of a negative character. There was a slight increase in intensity from 8. till 8. 45, a. m. of 1½ degrees, but possessing the same negative or vitreous character. The only effects on the animal creation which were observed, was the frequent

crowding of cocks; and on the vegetable kingdom, the flowers of the "morning glories," *convolvulus*, seemed somewhat drooping.

The Photographic Artist (Mr. Notman) to whom I have referred, obtained some beautiful ambrotypes of the Eclipse by direct view and is a curious specimen of instantaneous photography. The large spot referred to is well shown and the "hazyness" on the sun's outer edge is also well seen. He kindly sent me copies, printed off from the original "negatives" and which are fine specimens of the art, and will bear comparison with others taken in the various stations over the American and European continents. Those favoured friends of science who have witnessed the *totality*, will, there is little doubt, give to the world their results, and the appearances will be preserved for future astronomers by the aid of Photography, and the greatest accuracy will no doubt be obtained. The cause of the rose coloured prominences, which have been the source of so much speculation, will no doubt be in some measure established, and it is hoped that Dr. Lamont's, (Astronomer Royal at Munich) theory will receive that attention, which from his high position it deserves. His theory the most recent one which has been started in respect to these prominences is, that they are produced in our own atmosphere by little masses of clouds, which become condensed in the line of the moon's shadow, owing to the depression of the temperature which takes place; hence these views differ from any theory yet offered.

The curious and well marked appearance of "*Baily's beads*" will also form an interesting object for the Photographists. Leverrier has lately called the attention of observers to a thorough examination of the regions in the close neighbourhood of the sun during the few minutes of totality, with a view to the detection of the Asteroids. His theory of planetary perturbation assigns to these spaces these small planetary bodies.

Curve showing the average daily range of Temperature and its departure below, during the partial Eclipse of the Sun, 18th July, 1860. St. Martin, Isle Jesus, Canada East.



Observatory, Isle Jesus, 27th July, 1860.

[In connection with the foregoing observations by Dr. Smallwood on the eclipse of the 18th July, we append the following short ones by ourselves. The commencement of the eclipse was not visible here in consequence of the Eastern sky having been obscured by massive cumulus clouds. About 23 minutes after 7 a. m., however, the sun emerged shewing about two digits eclipsed. As it advanced the cusp was well defined. The dark black body of the moon was indistinctly visible, but the edge of the shadow, between the sun and moon, varied in tint from deep black to dark ruddy as it approached the sun. The last contact of the shadow occurred at 9.20 a. m., mean time, and was seen a little to the south of the sun's Eastern limb. About 7 digits were eclipsed in toto. The Dew Point gradually rose as the observation advanced. Thus at 7 a. m. it was $57^{\circ} 3'$. At the hour of 8.13, the period of greatest obscuration, it was observed to be $59^{\circ} 4'$, shewing an increase of $2^{\circ} 1'$ degrees, and at the termination of the eclipse, it had still further risen by $1^{\circ} 9'$ degree more, the dew point then being $61^{\circ} 3'$ degrees. These observations conclusively demonstrate a marked increase in the humidity of the Atmosphere. We did not observe any decline in the Temperature of the air, but on the contrary, the open air Thermometer, which at the commencement of the eclipse shewed a temperature of $68^{\circ} 7'$, gradually increased, shewing at 9.30 a. m., a temperature of $73^{\circ} 5'$ degrees.]—A. H.

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No. 2.

To many of us here, who become wearied and tired at times from the arduous nature of our daily professional work, it is a great relief occasionally to turn to something else as a source of recreation, although the mind is still engaged in absorbing information. This constant mental work would be destructive were it not that variety offers a medium of relief. Besides, at the medical Societies it is no uncommon circumstance to find medical men at the meetings of the Geological, Linnean, Zoological or some other society, as an agreeable change and amusement. And after all there are very few of us who do not possess some knowledge of one or more branches of natural and physical science. On the 28th February and 6th March I attended the meetings of the Zoological Society in Hanover Square, the Society that is the possessor of the remarkable garden in Regent's Park. The chief paper for these two evenings was one by my friend Dr. Crisp, on the diseases and causes of death among animals, birds and reptiles as furnished by the Zoological Gardens. This was one of the most remarkable papers that I had ever heard, and contained the result of several thousand examinations made by Dr. Crisp himself at his leisure moments, and for which opportunities were afforded him whilst prosecuting his researches into the structure of the spleen and the thymus gland. His elaborate essay on the latter, procured for him, but the other day, the costly Cooper prize of 300 guineas. It would be superfluous for me to attempt even an analysis of his curious paper, but I may mention the cause of death of the boa constrictor which swallowed a blanket some years ago; it was intense pericarditis, and a drawing of its liver was shown

with some tubercles in it. His paper will be published *in extenso*, and I hope to procure a copy for your Journal to review. Of many other things brought forward, were a mummy ibis and a mummy cat, by Mr. Frank Buckland. Their interior contained numerous beetles generated at the time of their original preservation; these last were lately exhibited by Mr. Westwood at the meeting of the British Association for the advancement of Science held at Oxford.

The Association met this year at Oxford, and was well attended by *savans* from various parts of the world, besides the leading men of science of Great Britain. As usual many original and very novel subjects were brought before the different sections, where their merits were thoroughly discussed. Among these were papers on the influence of domestic animals, (birds). On the progress of civilization, by Mr. John Crawford. On the deodorization of sewage by Dr. James Bird. On the present state of Natural History in the United States, by Rev. P. P. Carpenter. On the geological characteristics of the Sahara, by the Rev. H. B. Tristram. On British storms, with large diagrams, by Admiral Fitzroy. On the velocity of the sound of thunder, by Rev. J. Earnsham. On the occurrence of poisonous metals in cheese, by Professor Voelcker. On a plant poisoning a plant, by R. Dowden. On the nature of death by chloroform, by Dr. Kidd. On the intellectual development of Europe considered with reference to the views of Mr. Darwin and others, that the progression of organisms is determined by law, by Professor Draper of New York. On Saccharine fermentation within the female breast, by Dr. Gibb. On the aborigines of the Arctic regions of North America, by Dr. Rae. On the possibility of studying the earth's internal structure from phenomena observed at its surface, by Professor Hennessey. On experimental enquiry into the nature of steel, by Mr. Arthur Durham. On the proposed communication between the Atlantic and Pacific *via* British North America, by Captain Syngé, R. E. On the artificial production of bone and osseous grafts, by Mr. Ollier, of Lyons. On the ultimate arrangement of nerves in muscular tissue, by Professor Beal. On the antiquity of the human race, by Dr. James Hunt.

These are but a few topics selected from a large number, they will no doubt be published *in extenso* somewhere, and I shall not enter into them. I may however, say a word on the last subject, namely the *Antiquity of the Human Race*; engagements in another section prevented my hearing this paper, and therefore I am not aware what were the author's arguments. However this much may be said, that in regard to the period of time, at which poor Adam made his appearance on the earth, in consequence of recent discoveries in which human implements have been found at Amiens, Abbeville and other places in the *drift* it is presumed (if the evidence holds good,) that our supposed common parent Adam must have left us but yesterday, in comparison to the vast periods of time which must have elapsed since his predecessors were first placed on our planet. Or, to speak perhaps in more precise terms, the creation of man goes back, not 4000 years B. C., but probably 100,000 or 200,000 years before that time; indeed I do not know but that even is below the mark. However, although the evidence is most startling, and receives great consideration at the hands of scientific men, it is most cheering to reflect that the integrity of that

great work upon which we have all built our faith—the Bible—remains unimpeached.

What man's earliest condition may have been we don't know, it must have been a very rude one; a reference to a work entitled "Preadamite Man," may afford us a hint.

To refer to the city of Oxford where were assembled many of our London medical men, during the late meeting. Most of us were accommodated with apartments gratis, in some of the splendid colleges; mine were in Exeter College, and I should never desire better. All the libraries were thrown open to us, and I availed myself of a visit to the *Bodleian*. Here, indeed were treasures! manuscripts of the earliest periods in great number and good preservation. Some of the choicest and most perfect were spread out for exhibition, and I noticed among them many illuminated missals and other works on parchment; one manuscript formerly belonged to Queen Mary; another was in the hand writing of Queen Elizabeth in old English and as well written almost, as if printed; a psalter in purple vellum printed in gold, 10th century. I noticed also a scarce Mexican manuscript with all the symbolical figures.

In my rambles through Oxford I visited the rooms over the gateway in Pembroke College, which were at one time occupied by Dr. Samuel Johnson. Opposite to where I dined, was a very old house, which once formed part of the old Crown Hotel: in this house Shakespere wrote his *Winter's Tale*. I was shown over an old house in Pennyfarthing St. (now called Pembroke St.) in which Charles II used to meet with his cavaliers; it is a mass of oak, and as perfect as the day it was built. It was at that time the property of a Mr. Penwarden and the street was called after him, but corrupted to Pennyfarthing.

Blenheim the magnificent seat of the Duke of Marlborough is probably familiar to many of your readers. My visit to it was with a party of friends, and it was amusing to see in our rambles, the avidity with which the fairer members of our party drank from the fair Rosamond's well. In going through the churchyard of the little old village of Woodstock, I read the epitaph of the Rev. Wm. Mavor, L.L.D., Rector of Woodstock many years, who died 29th Dec. 1837, aged 80. In fact I would weary your readers with a description of all I saw and heard at Oxford, suffice it to say that every member of the British Association was gratified beyond measure, for all combined pleasure with the business of the meeting. I trust that next year, if my life is spared, to spend an equally agreeable and instructive one in Manchester, although there will not be so much to excite our love for the antique as at Oxford.

See! *Oxford* lifts her head sublime,
Majestic in the moss of Time!
Nor wants there *Graecia's* better part,
'Mid the proud piles of ancient art.
Nor decent Doric to dispense
New charms mid old magnificence;
And here and there soft Corinth weaves
Her *dædal* coronet of leaves.

Warton's Ode.

The medical aspect of the metropolis is just now uncommonly dull and I have no news of particular interest to communicate to your readers. A new journal

has been started under the name of the *London Medical Review*, it is a monthly, is published at a shilling, and will no doubt contain much valuable matter for a time. But alas! like many others, it must ultimately succumb for the want of that pabulum so essential to success, namely a good and permanent subscription list. Every man's pocket is here taxed to the utmost, and it is not one or two publications that he takes, but generally six or more. The *Scarificator* commenced some two or three years back, survived four or five numbers. Edinburgh publishes now but one journal, formerly it had two. Many more instances of the same kind might be given to show the difficulty experienced in multiplying periodicals, and if sold at too low a figure, their dissolution is the more speedy. There was some talk of starting *London Hospital Reports*, similar to the *Dublin Journal*, but the weeklies contain the cream of what is interesting in those storehouses of knowledge.

The death of Dr. Addison the well known physician of Guy's has produced a great sensation, and as the particulars have occupied the Brighton newspapers, I need not conceal the cause of it. For some months he has been labouring under disease of the mind, commencing shortly after his removal to Berkeley Square, a measure induced by his rapidly increasing practice. It was necessary to remove him to the sea-side, where he made an attempt to destroy himself in the throat, but was thwarted. A second effort was more successful; for he jumped out of a window and fell upon his head, fracturing his skull so extensively as to cause death. Thus perished a man whose name will long live in the new disease which goes by his name. Would that his end had been as peaceful and calm as his not less gifted compeer Bright. It is a curious fact that Bright and Addison, two men who were long associated together, and who worked in harmony, should each have his name associated with a special disease of such organs as the kidney and supra-renal capsule, two organs so closely connected by relationship and situation. Both were Guy's men, and it was at Guy's their discoveries were made.

An attempt is being made to establish an *Hospital for Stone!!* leading to the inference that stone is such a common disease, that our hospitals cannot accommodate the immense number of cases presenting themselves for relief. A most capital article on the subject appears in the *Lancet* of 7th inst., which meets with the approval of every hospital man in London.

London, 9th July. 1860.

REVIEW DEPARTMENT.

ART. XLIV.—*A system of Surgery, Pathological, Diagnostic, Therapeutic, and Operative.* By SAMUEL GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia, &c., &c. Illustrated by nine hundred and thirty six engravings. In two volumes. 8vo. pp. 1162 and 1198. Philadelphia: Blanchard and Lea. Montreal: B. Dawson and Son. 1859.

If we inspect the domain of Surgical Literature, we will find but few works of pretension sufficient to entitle them to the appellation of Cyclopædias or "Sys-

tems." With the exception of "Coopers' Surgical Dictionary," now rather antiquated, and the volumes of Chelius, as translated and enlarged by South, we have no works in our language which can justify such a title. Indeed if we except monographs upon special subjects, little has been undertaken beyond text books for the classes in the Universities and Schools in which their respective authors taught; yet fulfilling to a certain extent the demands of the profession, they still fall far short of the amplitude, which the surgeon in general practice demands. To supply this desideratum has been professedly the intention of the work before us.

In the preface, stating the object and intention of his work, the author says: that he desires to "furnish a systematic and comprehensive treatise on the science and practice of surgery, considered in the broadest sense; one that shall serve the practitioner as a faithful and available guide in his daily routine of duty." Furthermore he remarks, "my aim has been to embrace the whole domain of surgery, and to allot to every subject its legitimate claim to notice in the great family of external diseases and accidents." And again, "it may be safely affirmed, that there is no topic, properly appertaining to surgery that will not be found to be discussed to a greater or less extent in these volumes." Now on carefully examining these volumes we have little hesitation in stating it as our opinion that the practical surgeon will find in them all that he desires, certainly less in detail than special treatises on special subjects will afford him, but nevertheless, as far as the real practical value of the author's labours are concerned, every information that he really needs; and what tends materially to refresh the memory, and assist in comprehending the text, the volumes are illustrated by a very extended series of beautifully executed engravings, amounting to about 1000, of which nearly 400 are original.

In a work of this character, whose boundaries are as wide as those of the whole subject of which it treats,—the surgical incidents and accidents of the human organism as a whole,—it would be doing an injustice to select any particular subject and submit it to a thorough critical examination. Deficiencies under such circumstances may be found, either in the description, the history, or some other detail of the matter under consideration. It is impossible it should be otherwise. To have entered minutely into every detail connected with every subject would have required the labour of a life time, and the extension of the two volumes, to eighteen, the number of the *Encyclopædia Britannica*. This however was not the intention of the author. He has encountered his principal difficulty in condensation, in detailing the chief points of value to practical surgeons and in the omission of all that was supererogatory; and in remarking that this has been done well, is but according to the laborious author a minimum amount of mere commendation for his work.

To exhibit to our readers the comprehensive nature of the treatise, we propose to shew the manner in which the subject has been handled.

In the first place, the work is divided into two parts, part first being devoted to general surgery, and part second to special surgery, or the diseases and injuries of particular organs, textures and regions. The first part or volume, contains nineteen chapters, the subjects treated under each of which being as follow:—
Chapter 1. Irritation, sympathy and idiosyncrasy. 2. Congestion. 3. Inflam-

mation. 4. Termination and results of Inflammation. 5. Textural changes. 6. Congenital malformations. 7. Tumours or morbid growths. 8. Scrofula. 9. Wounds. 10. Effect of injuries upon the nervous system. 11. Syphilis. 12. General diagnosis. 13. Minor surgery. 14. Operative surgery. 15. Plastic surgery. 16. Subcutaneous surgery. 17. Amputations in general. 18. Excision of bones and joints. 19. Anæsthetics.

The second part contains eight chapters, divided as follows: Chapter 1. Diseases and injuries of the skin and cellulo-adipose tissue. 2. Diseases and injuries of the muscles, tendons, bursas, and aponeuroses. 3. Diseases of the lymphatic vessels and ganglions. 4. Diseases and injuries of the nerves. 5. Diseases and injuries of the arteries. 6. Diseases and injuries of the veins. 7. Affections of the capillaries. 8. Diseases and injuries of the joints.

Our readers can thus appreciate the very comprehensive character of the work.

Indeed a most cursory examination of the volumes must pronounce in favor of the author, who independently of his previously well earned fame as a practical surgeon of the highest eminence, and in the publication of his classical treatise on "the Diseases of the Urinary organs," has now succeeded in producing a system of surgery, which we think unrivalled in our language, and which will indelibly associate his name with surgical science.

And what in our opinion enhances the value of the work is, that while the practising surgeon will find all that he requires in it, it is at the same time one of the most valuable treatises which can be put into the hands of the student, seeking to know the principles and practice of this branch of the profession which he designs subsequently to follow.

The volumes are admirably got up in Blanchard and Lea's best style.

ART. XLV.—*Currents and counter-currents in Medical Science*: an address delivered before the Medical Society, at the annual meeting, May 30, 1860.

BY OLIVER WENDEL HOLMES, M.D. Boston: Ticknor & Fields.

This is an address of singular ability and eloquence, abounding in epigrammatic beauty and sparkling imagery. As might have been expected from the "Autocrat of the Breakfast Table," it is also marked by originality and depth of thought.

The chief purpose of the address is to urge more reliance than generally obtains at present upon the natural powers of the human system, in preference to dosing or overdosing; and in proof that his view in this regard is not new, and not unsupported, he adduces the telling facts, "that no families take so little medicine as those of doctors, except those of apothecaries, and that old practitioners are more sparing of active medicines than younger ones." In dispensing blame for what he designates "extravagance in remedies and trust in remedies," Dr. Holmes does not spare his own countrymen, whose faults in this particular, he groups, most amusingly, with other national peccadilloes. "How could a people, he says, "which has a revolution once in four years; which has contrived the bowie-knife and the revolver; which has chewed the juice out of all the superlatives in the language in Fourth of July orations, and so used up its epithets

in the rhetoric of abuse, that it takes two great quarto dictionaries to supply the demand, which insists upon sending out yachts and horses and boys to outsail, outrun, outfight and checkmate the rest of creation; how could such a people be content with any but heroic practice? What wonder that the stars and stripes wave over doses of ninety grains of Quinine, and that the American eagle screams with delight to see three drachms of Calomel given at a single mouthful." The authors's reasoning in favour of trusting more to the capacity and kindness of Dame Nature will no doubt be well considered by the profession, but we apprehend that it will not go so far as to adopt his strong belief, that "if the whole *Materia Medica, as now used* (with the exception of a few specifics which he names), could be sunk to the bottom of the sea, it would be all the better for mankind—and all the worse for the fishes."

Two striking features in the address are "the coincidences between certain great political and intellectual periods, and the appearance of illustrious medical reformers and teachers," and "the fallacy of the universal degeneration theory as applied to American life." One idea on the former head deserves to be quoted for the very original wording in which it is given: "Our unfortunate medical brother, Michael Servetus, the spiritual patient to whom the theological moxa was applied over the entire surface for the cure of his heresy came very near anticipating Harvey." We may doubt this, however. In reference to the "degeneration" question, the author seems to think that the "downward movement" is in England—not in America, and quaintly enough reminds us that "one of his countrymen has lately brought some very forcible facts to bear in a muscular discussion on this subject." We think it might be admitted that in the case alluded to, all the force was not on one side, and although some of *Tom Sayer's* movements were undoubtedly "downwards," still the summing up of the discussion, out of which *Heenan* could scarcely see his way, shewed any thing but degeneracy.

The author is again hard upon what he properly terms "the solemn farce of homœopathists enacted in the face of our too credulous civilization;" of the professors of which he says, "they have been introducing the venom of serpents under the learned title of *Lachesis*, and outraging human nature with infusions of the *Pediculus Capitis*, that is, of course, as we understand their dilutions, the names of these things; for if a fine-tooth comb insect were drowned in Lake Superior, we cannot agree with them in thinking that very drop of its waters would be impregnated with all the *pedicular* virtues they so highly value." Continuing his remarks he observes, "they know what they are doing—they are appealing to the detestable old superstitious presumption in favour of whatever is nauseous and noxious, as being good for the sick."

We have seldom been more pleased than by the perusal of this excellent address, and would willingly copy it word for word did other demands upon our space permit. We can only say in conclusion, that we trust it will be extensively read, not only by the profession but by the public at large.

MATERIA MEDICA.

CAFFEINE IN OPIUM-COMA.

THE SECOND CASE OF THE INJECTION OF CAFFEINE, BY THE RECTUM, IN EXTREME NARCOTISM OF OPIUM. BY HENRY F. CAMPBELL.

In the May number of the *Southern Medical and Surgical Journal*, of the present year we reported the particulars of a case of Opium-Coma of a very grave character, in which *twenty grains of Caffeine*, injected into the rectum, produced the most surprising and satisfactory results. At the close of that former paper, we expressed the wish that some member of the Profession would repeat the treatment applied by us in that case, and either confirm or disprove our confidence in the remedy. The various medical journals of the country have commented upon this paper, and have generally approved the rationality of the measure, but, as yet, we have not been gratified by observing the report of any second trial of Caffeine under the circumstances, or any additional evidence in support of our favorable conviction in regard to the antidote. A case which occurred to us on the 10th of July instant, affords us the privilege of being able to report the second case of the application of Caffeine for Opium-Coma. Although the following case was not attended by the same happy results as that reported in our May number we think that the details of the phenomena, so far from weakening our confidence in the remedy, will go far to confirm it.

July 10th, 1860, 3½ o'clock, P. M., called in haste to the U. S. Hotel, in this city, to visit a gentleman, said to have been found in a dying condition in one of the rooms. The patient was Mr. Moses Pike, a Jew, aged about 28 years, of good constitution apparently, and well developed corporeally. On entering the room, we found him in the following condition: He was entirely unconscious; face of a dark purple hue; hands and feet also purple from congestion; nails on fingers and toes of an indigo color. There were also patches of venous congestion, presenting a darkened hue all over the surface. His respiration was fearfully slow when counted, *not quite four to the minute*. The attendants were slapping and shaking him each time between the inspirations, to excite him to breathe. His respiration seemed greatly obstructed by the accumulation of mucus. Pulse very feeble, and about 100 per minute. The muscular system was completely relaxed, so that his head would fall about by its own weight, and his arms and legs obeyed only the influence of gravity.

Immediately on our arrival, a paper was found, on which the unfortunate man recorded the fact that he had taken laudanum at 12 o'clock the night previous, with the intention of self-destruction. Two empty vials labelled laudanum, one of 2 ounce capacity, the other of 1 ounce, was found on the table. One of these vials had the neck knocked off, apparently with the view of opening it hastily—and some of the laudanum had escaped so as to leave a stain upon the label. It is probable, therefore, that the entire three ounces had not been taken. Once or twice during the morning, the servant stated, that he had approached and tried the door, with the view of entering, but had desisted when he heard the occupant snoring deeply, as he did not wish to disturb him. Somewhat after 3 o'clock, P. M., the servant became alarmed and looked into the room through the transom-light from a chair, and observing his condition, called for assistance.

From the above circumstances, as well as from the written statement of the patient, it was highly probable, that near 3 ounces of laudanum had been in his system nearly fifteen hours—that so large an amount had not produced death in so long a time, is truly unaccountable.

The condition of the patient, the necessity of constantly provoking respiration, and also the little probability that any laudanum yet remained in the stomach, caused us to abandon the idea of using the stomach-pump. Emetics of course were out of the question, and we at once resorted to the application of ice to the scalp, and pouring ice-water, from a distance, upon the head; while we sent for a drachm of Caffeine, and a small syringe. As soon as these arrived, we poured out in the palm of the hand what we supposed to be about twenty grains of Caffeine, dissolved it in two ounces of cold water, and introduced it into the rectum by means of the syringe. The syringe being small, three applications were made at short intervals. The whole of the alkaloid was not dissolved. By an estimate made subsequently, calculating what had been lost, the patient had taken near *twenty-five grains of Caffeine* in the three applications.

The Caffeine was administered at twenty minutes before four o'clock, at which time, as we have said, the respiration of the patient was *scarcely four to the minute*, and constant efforts were necessary, in the way of slapping and shaking to provoke him to inspire. At fifteen minutes after four, (35 minutes after the injection) his respiration was found to be effected with less effort and more regularly—and, on counting it by the watch, it numbered eight to the minute. The skin, even now, began to present less of the cerulean tint. In one hour after, the respiration had risen to twelve, and shortly rose to sixteen to the minute, when the skin was nearly of the natural hue, though the nails on both hands and feet remained still of a purplish cast.

Slight spasmodic movements in the fingers were now observed, and also some occasional subsultus in the muscles of the forearm—the under lip, which before was hanging, now became elevated and slightly compressed against the teeth. When the hand of the patient was held, and an attempt made to extend the arm at the elbow, decided muscular resistance was observed. The lid of the left eye was also observed to be raised and let down rapidly once or twice.

The pulse had now become full and somewhat resisting, and the action of the heart, as observed at the chest, tumultuous. On being raised, the patient, once, made a noise slightly resembling a groan, but, from the beginning to the end, he did not once manifest the least consciousness.

For a short time after the improvement in the respiration began, the mucous rale seemed somewhat to diminish, and his breathing, were it not for a certain jerking, resembled very nearly a man in deep, healthy sleep. The rale now, however, ($\frac{1}{2}$ past 7 o'clock) became more and more obstructive, the gurgling reaching up into the throat and threatening momentarily to strangle the patient. It was now plain that he could not survive, and, on turning him upon the right side, a bloody mucus bubbled out of the nostrils. The number of the respirations was at this time twenty to the minute, when counted by the watch. The entire surface of the body was intensely hot and remained so to the time of the patient's death, which took place at 15 minutes before nine o'clock, P. M. He seemed to die from the accumulation of the bloody mucus, in the bronchial tubes and larynx. During the whole time, from the first moment of our seeing him till the time of his death, the application of ice was made constantly to the head of the patient, and also mustard plasters were applied to the spine and to the extremities.

A superficial glance of the foregoing case might perhaps impress the reader with the conviction that the confidence which we expressed, in our former report, in Caffeine as an antidote in Opium-Coma, was somewhat hasty and misplaced. A more deliberate consideration, however, will remove such an impression. When we reflect on the amount of the opium taken, the length of time during which the patient had been left to its toxic influence, and the destructive ravages which had been made during that time, we certainly, on the other hand, must feel great surprise at the amount of modification the Caffeine was seen to produce under such disadvantageous circumstances. The respiration, in a space of time, less than one hour, was raised from four to sixteen in the minute.

The color of the skin under its influence, was changed from an almost indigo hue, to that of the natural complexion, and the muscular relaxation was replaced by a fair degree

of tonicity accompanied by occasional twitchings. The mode of death too, was not such as is seen in the demise from the unmodified effects of opium, when the respiration becomes gradually slower and slower till it ceases altogether, but at the time of our patient's death, his respirations numbered twenty per minute, and he died apparently *drowned* by the accumulation of the viscid mucus in the air-passages doubtless the result of the long enduring pulmonary congestion occurring previous to the administration of the Caffeine.

In conclusion, we feel confident in saying that we feel greatly encouraged by the developments of this second case, and shall use the remedy hereafter, with even more confidence than before. We again express the hope that some of our professional brethren will add their published testimony to ours so as to establish the true amount of value that should be attached to Caffeine as an antidote of Opium-Coma.

We intend shortly reporting the results of experiments, with two drugs, Opium and Caffeine, as made by us, on the lower animals.—*Southern Med. & Surg. Journal.*

ON IODISM.

By DR. RILLIET, of Geneva.

M. Rilliet, whose experience in Geneva gives him great opportunities for studying the effects of iodine, admits three kinds of poisoning by this drug. The *first*, which is produced by iodine, or its compounds given in a large dose, is an acute form of poisoning admitted by all authors, and described by Orilla, Magendie, Devergie, and Ricord, consisting primarily of gastric disturbance, and in a few cases leading to fatal results. The *Second* kind of poisoning is characterized by nervous and neuralgic symptoms, ringing in the ears, convulsive movements, and iodic intoxication; also by disturbance of the secretions, coryza, ophthalmia, salivation, vomiting, diarrhœa, and cutaneous eruptions, It is further characterized by atrophy of the mammary glands and testicles. The *third* kind, less known than the foregoing, but particularly described by M. Rilliet, is the affection which has received the name of *constitutional iodism*.

The latter affection may exist in all degrees of severity, but for the purpose of description the author divides it into *slight iodism*, *iodism of moderate severity*, and *severe or very severe iodism*. In the slight cases, after the more or less prolonged use of iodine the patients, after congratulating themselves on the diminution of their goitre (if they have suffered from that affection), soon begin to perceive that they have become pale, thin, and weak. This remark is more generally made by their friends than by themselves, as the preservation of their general health, and sometimes even the improvement of their appetite, deceives them as to their true condition. They are, however, soon attacked by palpitations, depression of spirits, sleeplessness and other nervous symptoms, which will probably disappear on the discontinuance of the use of iodine. The continuance or aggravation of these symptoms characterizes the cases of *iodism of moderate severity*. In this form, the emaciation, the depression, the weakness, the want of sleep, and the palpitations increase, and some patients complain of painful sensations in the stomach and diaphragm, with constipation. These symptoms, however, are all removed under appropriate treatment, and especially by suspending the employment of the iodine. The *severe or very severe cases of iodism* are ushered in by symptoms similar to those of the cases last described, but they are rapidly manifested, and assume a very intense form. When a goitre exists, it diminishes and disappears in a few days, and this is a point particularly insisted upon by M. Rilliet. But at the same time the patient becomes emaciated with alarming rapidity, and in a few weeks or a few days it becomes impossible to recognise him; the emaciation is general, but is most marked in the glandular organs, the breasts, and the testicles. The pulse is accelerated, rather small than full, and more rapid at some periods than at others. The skin of the face

is pale, yellowish or greenish, the features express sadness or anxiety; the eyes which are sunk, are sometimes fixed, sometimes wandering. There is great weakness, the patients tremble, and are out of breath at the slightest movement, and their voice is broken. The nervous symptoms are strongly marked, there is a remarkable restlessness and irritability; and an extraordinary disposition to be alarmed at everything succeeds to mental repose, and the sleep is continually disturbed by nightmare. In the midst of all this disturbance the appetite remains, and is sometimes even greater than usual, and the patients are seldom confined to bed. When seen in this condition it might be supposed that death would be the consequence of the disease, but such is not the case, for a cure is the rule and death the exception. Still the cure is effectual only after a rather long period, the ordinary duration of the complaint being from two to four or six months; sometimes, however, health returns after a few weeks, but for a long time afterwards the patient bears traces of the affection—in men, atrophy of the testicles, and in women, atrophy of the breasts, being often the permanent results. The most characteristic symptoms are rapid emaciation, coinciding with bulimia, which are the capital signs of constitutional *iodism*; and indeed the diagnosis is founded upon these signs together with the absence of any organic lesion. An important circumstance in the prognosis is the age of the patient, for it is the more serious in proportion to the more advanced age. Although death from iodism is by no means frequent, it is nevertheless a very painful affection, for it injures the constitution, deprives its victims of all enjoyment of life for many months and even for many years, and often renders existence insupportable. With regard to the diagnosis, when the symptoms have begun rapidly, the acceleration of the pulse, its irregular movements, the paleness of the integuments, and the emaciation may give rise to the suspicion, when the patients are feeble and nervous women, that the case is one of *false chlorosis*, simulating phthisis, an affection particularly described by M. Rilliet in 1855. But the history of the case will clearly distinguish its nature; and moreover as the use of iodine may give rise to chloro-anæmia, too great importance should not be attached to any chlorotic symptoms which may present themselves.—*Medico-Chirurgical Review*.

VALERIANATE OF STRYCHNIA.

By R. WYSONG, M. D., of Charlotte, N. C.

The above compound, so far as my knowledge goes, has never been introduced into the Pharmacopœias, either of this country or of Europe. I feel, therefore some delicacy in bringing it before the profession; but believing, as I do, that it will prove an acquisition to an already long list of medical preparations, and trusting to the liberality of the profession for a fair trial of this new preparation before they condemn it, I will give my limited experience with it.

I have been using the valerianate of strychnia some ten months, and find that it is more particularly adapted to those cases where there is general debility, accompanied with nervous excitability, loss of appetite, indigestion, constipation, depression of spirits, and all the symptoms following more or less on the want of tone in the nervous system. Heretofore, in many of such cases, I have used strychnia, and although they generally improved under this treatment, yet I never met with as complete success with it as I have in similar cases with the valerianate of strychnia; hence I am led to believe that, in all such cases as above mentioned, we have in this preparation a very reliable and useful remedy.

The preparation I have been using is prepared by dissolving sulphate of strychnia in valerianic acid. So simple a preparation can be put up by any physician or druggist. I have been using it in the following proportions:—

Sulphate of strychnia,.....gr. viij.

Valerianic acid,..... $\frac{5}{8}$ i.

But this quantity may be altered to suit particular cases.

The following are some of the cases in which, among others, I have used it with entire satisfaction :—

May, 1859.—Mr. E., aged 45 ; has suffered with asthma for fourteen years ; has tried various remedies without the least benefit. The paroxysms came on about once a week, he never passing two consecutive weeks without having one ; is very nervous, and suffers from general debility.

Jan. 19th, '59.—Prescribed.

℞.—Sulphate of strychnia,..... gr. i.
Pure water,..... ʒ i.
Acetic acid,..... ; q. s.

Directed ten drops three times per day, to be increased one drop per day until the dose reached thirty drops. Kept him on this prescription one month without any apparent benefit.

Feb. 20th.—Prescribed.

℞.—Valerianate of strychnia,..... ʒ i.
Water, ʒ i.

Directed ten drops three times per day, to be increased as above. Has never had but one paroxysm since he commenced with this prescription, and is now, to all appearances in good health. The medicine was kept up about one month.

Sept. 20th.—He continued free from asthma ; occasionally, during damp or rainy weather, experiences slight hoarseness, with disposition to clear the throat. This is generally relieved by a few doses of the sol. valerianate of strychnia.

May, 1859.—Mr. R., aged 60 ; has had asthma since July, 1858, the paroxysms increasing in frequency each week. He now has one nearly every day, and sometimes two per day. In conjunction with asthma, he has bronchitis, also indigestion, torpor of the liver, as indicated by decided yellow hue of the skin, constipation, and ashly stools, he never having an evacuation without taking some purgative ; at times there is decided strangury ; this seems to be superinduced by constipation, as it is always relieved by free action of the bowels. Pulse over 100, small, and at times can scarce be counted : great general debility—spends more than half the day in bed ; very nervous, so much so that by reading the last exciting newspaper article, or even conversing with a friend, will at times bring on a paroxysm. Cannot sleep in the recumbent posture, but is compelled to be propped up nearly straight in bed. The paroxysms come on generally about 3 P. M., but may be brought on any hour by the least excitement. Has been in the habit of taking nauseants when he feels an attack coming on, which, after several hours, relieves him for the time.

May 13th.—Prescribed

℞.—Valerianate of strychnia,..... ʒ i.
Water,..... ʒ i.

Directed to commence with five drops three times per day, to be increased three drops per day until the dose reached thirty drops. For several weeks had no sensible effect, owing to the dose being too small, and very irregularly taken ; in fact, he seemed to be growing worse.

May 31st.—Prescribed.

℞.—Acetate of squills,..... ʒ i.
Tart. ant.,..... gr. ij.

Directed to begin one hour before the usual time for attack ; teaspoonful every fifteen minutes, until nausea was produced. At the same time prescribed

℞.—Valerianate of strychnia,..... ʒ ij.
Water,..... ʒ i.

Directed fifteen drops three times per day, to be increased one drop per day as above

After the fourth day, as there had been no paroxysm, directed the nauseous mixture to be left off.

June 11th.—Has had no return of paroxysm; no sign of bronchitis; bowels regular; skin greatly cleared up; pulse seventy, rather full and strong; general health improved in every respect, so much so that he drives out several miles every clear day, and sleeps without inconvenience in a recumbent posture. Continued the valerian, thirty drops three times per day.

July 1st.—No return of asthma; health very much improved; seems quite free from nervous excitability. Continued the valerianate of strychnia as before.

Sept. 20th.—Continued free from asthma up to the latter part of August; had not been taking the medicine regularly for some weeks. About this time, during a very damp day, drove several miles to see a neighbour; upon reaching there sat down in a draft of air completely chilled, which brought on his asthma. Since that time has had one paroxysm. Saw him September 8th. Prescribed valerianate of strychnia as before. He is now enjoying his usual health.

I have given the above case at some length, in order to show more fully what I conceived to be the effect of the medicine. I doubt very much whether the case will ever be permanently cured; but by the use of the above preparation the disease has evidently been kept at bay, and the patient's general health very much improved; and by long continued use of the remedy, he may possibly break up all tendency to asthma.

I have used valerianate of strychnia with very great success in the treatment of females. One case of inflammation of the ovarian gland followed by suppuration, in leucorrhœa; of course, in such cases, I also applied local means.—*Southern Medical and Surgical Journal.*

MEDICAL JURISPRUDENCE.

OPINION ON THE REMAINS OF A CHILD'S CORPSE FOUND IN A SEWER.

By PROF. JOS. MASCHKA, of Prague.

This interesting case is reported in the *Oesterr. Zeitschrift, für Prakt. Heilkunde* V., 44. Only the head, upper extremities, and thorax had been found; the spinal column from second lumbar vertebra downwards, pelvis, all abdominal organs and lower extremities were entirely wanting. Both pleura were filled with mire. The lungs floated in water, both before and after separation of the heart; the latter also floated alone. The lungs had occupied the posterior part of the thorax only, and were flabby and dirty-brownish red, arroded at the borders and covered with air vesicles at the surface and under the pleura. Even the smaller divisions of the bronchia contained traces of mire, which could be pressed out in the form of blackish drops, on making incisions into the substance of the lung. After opening of the superficial air-vesicles, and compression of the substance, the lungs sank to the bottom of the water. The heart was flabby, dirty-brown, bloodless; the foramen ovale, and ductus arteriosus open.

The determination of extra-uterine life and cause of death under so unfavorable circumstances, is so remarkable, that we gladly take the trouble to present to our readers the points of Dr. Maschka's testimony:

1. From the nature of the cartilages, hair and nails, as well as from the diameters of the head, and length of the extremities and parts of the body that remain, it may be concluded that the child was born at full term or near it.
2. With the progress made by decomposition, the hydrostatic test justifies no conclusion, but the existence in the

larynx, bronchia and even smaller ramifications of traces of the mire in which the corpse was found, leaves no doubt of the fact, that the child had lived and breathed, since the entrance of a foreign body into the air passages under the circumstances implies continued respiration. 3. The presence of this matter in the air passages, is also proof that the child was drowned (suffocated) to death in this mire, since such presence, by preventing the respiratory function, produces death in every human subject under all circumstances. 4. Whether the child was newly born, or whether it did not reach the sewer immediately after its birth, cannot be determined in this case. 5. Nor can it, on account of decomposition and absence of every sign of organic reaction be determined, whether any injury or violence was done the child previous to its suffocation. The loss of several organs was evidently caused from arrosion by rats. 6. Since individual parts, as f. e. the right half of the face, and the right upper extremity were well preserved and decomposition usually progresses rapidly in sewers, an interval of from eight to fourteen days may have passed since the birth of the child.—*Medical and Surgical Reporter, July, 1860.*

ON THE DETERMINATION OF LIFE OF NEONATI WITHOUT RESPIRATION.

Dr. Marklin, of Crefeld, publishes in the *Vierteljahresschrift für gerichtl. und öffentliche Med. Bd., XVI Hft.* 1. an able and instructive article thus headed, on the possibility of meeting in autopsies of neonati with conditions which must necessarily be ascribed to extra-uterine vital action, without our being able to prove that respiration or circulation of blood has occurred. He instances such contents of the stomach and intestines as can reach these organs only after separation from the mother. "Is it not conceivable," he then asks, "that a healthy child may be drowned to death by substituting for the circumambient air, water, or any other liquid, immediately after birth, before the function of respiration is established? And is it not possible, that under such circumstances the only manifestation of life which has occurred—i. e. deglutition—can leave unmistakable traces of its existence? He reports a case in point: A foetal corpse i. fished up from the Rhine. From its examination it resulted:—1. That the child had not been carried to full term, but was in a state of development between the 6th and 7th month of gestation. 2. That it had not breathed, and therefore, according to present law, not lived.

But there were other phenomena. In the upper part of the abdominal cavity there was found a quantity of black and white sand to the weight of about gr. xv., as source of which three openings were discovered below the pylorus in the course of the duodenum. Sand was also found in the stomach, as well as in the upper part of the intestinal canal, and in the oesophagus; and three granules also, in the windpipe. To explain how the sand came there, there are only three possibilities, i. e. 1. Either the sand suspended in the water must have penetrated the floating corpse; 2. Or the mouth of the child having been stopped up with the sand immediately after birth the sand must gradually have descended; 3. Or the child must have been placed, at once after its birth, into a fluid, largely containing such sand, and there made its first attempt at respiration and deglutition.

The first two explanations, the author shows to be inadmissible, mainly relying on the experiments of *Riedel & Kranzler* (Casper's Handbuch, vol. 1., p 567,) which prove that no liquid reached the stomach of child-corpses and dead cats under the most favorable circumstances possible. There remains, therefore, only the last mentioned explanation; and if this be admitted, it results; that *deglutition, resp. the contents of the stomach, may under certain circumstances prove that a neonatus was alive at birth, even if neither the phenomena of respiration, nor those of circulation can be discovered to have occurred.*—*Med and Surgical Reporter, July, 1860.*

MEDICINE.

ON IODISM.

Discussion at the Académie de Médecine. (*L'Union Médicale* March 8th, 1860.

According to the experience of M. Ricord, the iodide of potassium is most useful and efficacious in causing the rapid disappearance of all the symptoms for which it is prescribed; and a considerable physiological operation is likewise manifested in the increase of the appetite and the improvement of the digestion. The globules of the blood are increased, the strength is restored and the weight is augmented, for M. Ricord has caused his patients to be weighed. He has also observed the disappearance, as if by enchantment, of chlorosis, syphilitic marasmus, palpitation of the heart, etc. If it should be urged that these good effects are observed only among the Parisians, M. Ricord answers, that he has treated patients from all parts of the country, from Switzerland and even from Geneva, and that he has never observed any difference in the action of the iodide. Neither has he found that age, sex, or temperament exercised any influence over the production of the symptoms described by M. Rilliet. M. Ricord, however, does not allege that the use of iodide of potassium is never attended with inconvenience; he only maintains that the assemblage of symptoms grouped under the name of *iodism* by M. Rilliet, are very rarely observed. As to the atrophy of the breasts, M. Ricord has seen the fat disappear, but never the mammary gland itself; and as to atrophy of the testicles, he has never observed it except in circumstances where it might be explained by some morbid condition, such as syphilitic sarcocele, of which atrophy of the testicle is almost the inevitable result. M. Ricord admits that iodide of potassium is not suited to all cases, and some constitutions are insusceptible of its influence. Acute or chronic inflammation of the digestive canal contraindicates the use of iodine, which is also to be avoided in scurvy, in sanguineous or serous plethora, in hæmorrhages, etc. Admitting the truth of M. Rilliet's descriptions, M. Ricord attributes in great measure to local and edemic influences, and he advises patients who require iodine as a medicine, to be treated out of Switzerland, and especially out of Geneva, where the air, the water, and the prevalence of goitre, appear to exercise an injurious influence upon the treatment, and to produce serious complications of disease. It should be mentioned that M. Ricord prescribes iodide of potassium in doses varying from one to six grammes ($\frac{1}{4}$ of a drachm to 3 iss) while M. Rilliet has observed serious constitutional effects from doses which are almost Hahnemannian, but M. Puche is said to have raised the doses to fifty-eight, or even one hundred grammes.—*Medico-chirurgical Review*.

 THE PREVENTION OF PITTING IN SMALL POX.

By Dr. STOKES.

During the last five years Dr. Stokes has employed gutta percha and collodion in a considerable number of cases of confluent small pox for the purpose of preventing pitting in the face. In most of the cases the crust came off in large flakes or patches composed of the dried exudations and the covering material, leaving the skin uninjured. This kind of treatment was most successful in cases of a typhoid character, but appeared to be not so well adapted to those presenting a more sthenic type. Dr. Stokes considers that the application of poultices over the face is the surest method of preventing disfigurement in small-pox. Their use should be commenced at the earliest period, and continued to an advanced stage of the disease. In most cases they may be applied even over the nose, so as to cover the nostrils. This plan should fulfil three important indi-

cations of treatment—namely to exclude air, to moderate the local irritation, and to keep the parts in a permanently moist state, so as to prevent the drying and hardening of the scabs. The best poultice is formed of lintseed meal, which should be spread on a soft material, such as French wadding, and covered with gutta-percha paper or oiled silk. The conclusions to which Dr. Stokes arrives are the following: 1. That the chances of marking are much greater in the sthenic or inflammatory than in the asthenic or typhoid confluent small-pox. 2. That considering the change in the character of disease observed during late years, we may explain the greater frequency of marking in former times. 3. That in the typhoid forms of the disease the treatment of the surface by an artificial covering, such as gutta percha or glycerine, will often prove satisfactory. 4. That in the more active or non-typhoid forms the use of constant poulticing, and of every other method which will lessen local inflammation, seems to be the best mode of preventing disfigurement of the face.—*Medico-Chirurgical Review*.

SWEATING OF BLOOD.

By DR. JULES PARROT.

The occurrence of hæmorrhage on the surface of the body without solution of continuity and from internal causes, is so rare that a well-authenticated case deserves all the attention and analysis that Dr. Parrot has bestowed upon the one that has fallen under his observation. The following are its prominent features:—Mad. X., born in 1832, when 7 years old was affected with scrofulous ulcers of the right hand, which cicatrized after two years' treatment; later on, the cicatrices were the seat of a sanguinolent exudation, occurring without pain, and often without appreciable cause. One day, under the influence of severe grief, her tears were coloured with blood, and from this time the knees, thighs, chest, and the margin of the inferior eyelids, exhibited the bloody sweat at irregular intervals. At times the blood suddenly inundated the face, so that the patient looked as if she had been assassinated. The menses occurred at the age of eleven years, and for a time the symptoms were in abeyance, but soon returned with increased force. The hæmorrhage was commonly due to the mental emotion, and was associated with a temporary loss of motor and sensory power. She married at fifteen years of age; but the attacks became more severe, lasting at times one or two hours. They disappeared during the first pregnancy, and for a year after. Mad. X. appeared to be improving at the beginning of 1858; but after the severe illness of her child, she was seized, on the 1st of April, with a severe attack of unconsciousness, and hæmorrhage from the face, from which time Dr. Parrot was called in to attend her. He found her suffering from agonizing pains, alternately affecting the epigastrium, the inguinal and vulvar regions, the thighs, head, and thoracic parietes. On the 25th, the lady came to Paris; her period was somewhat behind-hand, and she had lancinating pains in every part of the lumbar region. Towards 4 p.m. they attacked the inguina, thighs, breasts, head, hypochondria, and epigastrium, and on these disappearing under the influence of chloroform, she had three epileptic fits. A circumscribed spot on the scalp then became painful, and Dr. Parrot saw the blood exuding from there, and drying up immediately after; subsequently all the painful points became the seat of bloody sweat. It formed a chaplet round the roots of the hairs, and flowed in sufficient quantity from the lower eyelids to allow of several drops being collected. Both before and after the discharge, the skin presented its normal appearance, not exhibiting any injection or spot. After several bilious vomitings, sleep was induced at 11 p.m. by a full dose of muriate of morphia. The day after the catamenia appeared, and the patient gradually improved, the attacks becoming less frequent, till they disappeared entirely. Four similar attacks were witnessed by the author subsequently to the one just described, on the 28th Sept. 1858, the 17th Nov., 1858, the 25th and 28th January, 1859. During the intervals, the patient enjoyed perfect health, looking well and healthy.

Her intellectual faculties continue unimpaired, and even after the severest epileptic seizures she suffers none of that prostration often witnessed after epilepsy.

Dr. Parrot's treatment has been directed towards combating the neuralgia during the seizures, and the strumous and chlorotic diathesis during the intervals. The former object he obtained best by chloroform inhalations, the latter he pursued by the exhibition of preparations of iodine and iron. After detailing the above case, the author goes with some minuteness into the history and pathology of the affection: he concludes with regard to the latter, that it is truly a secretion of blood from the sweat ducts, as evidenced by microscopic examination of the liquid, and close watching the surface from which the exudation takes place. He quotes several cases, the best and most complete of which is given by Professor Huss. We can only make room for one remark as a warning, that these cases are quite distinct from those known as "bleeders," and characterized by the occurrence of hæmorrhage, which it is almost impossible to arrest, from any part of the body on the slightest abrasion.

TUBERCLE IN THE HEART.

By DR. F. V. RECKLINGHAUSEN.

This is probably a unique case of military tubercle under the endocardium, occurring in a person aged twenty, who died of arachnitis, and exhibited acute military tuberculosis in the lungs, pleura, liver, spleen, kidneys, thyroid, and prostate. About twenty small, opaque, circular or elliptic nodules were found under the auricular and ventricular endocardium, embedded in the muscular tissue, and varying from one to one and a-half line in diameter. Under the microscope they were found to consist of moderate sized corpuscles, generally with a granular nucleus, and a dark, finely granular substance. The adjoining muscular fibres were atrophied.

ON THE EMPLOYMENT OF THE PULP OF RAW MEAT IN THE CHRONIC DIARRHŒA OF CHILDREN.

(Bulletin Général de Thérapeutique, May 30th, 1859.)

The plan of treating the diarrhœa of children by raw meat, as proposed by M. Weisse of St. Petersburg, has already been described; but Trousseau has lately introduced it into practice in Paris with great success, notwithstanding the natural opposition to such a system of treatment. Although the substance employed is raw meat, yet its administration must be accompanied by certain precautions, so as to render it palatable and digestible. The meat, in fact, must undergo a peculiar preparation, consisting in the complete separation of its fibres and the removal of all the cellular, fibrous, and tendinous parts which might offer obstacles to its solution in the gastric juice. The lean of beef, mutton, or poultry may be employed; but the first is far preferable. After having cut the meat into very small pieces, it is pounded and reduced to a thick pulp. This pulp is placed upon a sieve with small holes, after being stirred and pressed until the red and fleshy part can pass completely through the holes. Then the red strained matter is collected and mixed with sweetmeats, of which little balls are made for the children to swallow. Thus prepared, the pulp of the raw meat has not the taste of raw flesh, which, indeed, cannot be recognized; still, if the children continue to refuse it, the pulp is mixed with chocolate, and a new kind of aliment is obtained, the taste of which is more palatable. The quantity of raw meat thus administered to children ought not to be considerable at first, because they may dislike it, or suffer from indigestion. The dose for the first day may be ten grammes (four drachms) given at four separate times; the next day twenty grammes; the day after, thirty grammes, and so on in succession, until as much as 400 grammes may be reached; and then when the diarrhœa

has ceased, the quantity of raw meat may be gradually diminished, to give place to other nutriment, such as broth, eggs, &c. From the commencement of the treatment, all accessory nourishment is interdicted, and only mild, demulcent drinks are allowed. If the stools are examined on the first day, it is usual to find the meat in the same state as it was swallowed, and the fecal matters, which are excessively fœtid, are composed of colourless fibrine, a little cellular tissue, and mucus. The treatment must nevertheless be continued, and a slight increase of strength is soon perceived; the child resumes its cheerfulness, plays about, and is soon entirely restored to health. When once accustomed to this kind of food, it sometimes happens that the children do not wish for any other; and often when flesh almost bloody is presented to them, they seem ardently to desire it.

It is difficult to explain how the pulp of raw meat is more easily digested by a diseased alimentary canal than meat cooked and prepared according to the refined processes of modern cookery; but the fact, however empirical, is no less certain. The pulp of raw meat is not only applicable to cases of chronic diarrhœa in young children, but to others occurring at more advanced years; and it has been successfully employed to effect an improvement in the general health of young persons. Still, it is in the former cases that this treatment has been most signally successful, and two cases are recorded as having recovered under this plan at the Hôtel Dieu, under Professor Trousseau.

In opposition to the opinions of M. Weisse, it has been found in France that raw meat may be administered successfully to adults in certain cases of chronic diarrhœa. The cases in which it is probably most successful are those of the same nature as the infantile diarrhœa in which the beneficial effects of raw meat are most marked; namely, when the disease is accompanied by great debility, but without organic alteration of the structure.

SURGERY.

ON SYPHILITIC TUMOURS OF THE TONGUE.

By M. LAGNEAU, Jun., (Gazette Hebdomadaire, 1859, Nos. 32, 33, 35.)

In this paper M. Lagneau brings together the particulars of 10 cases, some having been already recorded and others having fallen under his own observation.

Etiology.—The affection has only been met with at an advanced stage of constitutional syphilis, some of the subjects being, nevertheless, otherwise in excellent health.

Excepting one instance, all the cases occurred in males.

Pathological Anatomy.—The tumours are sometimes seated deep into the muscular substance of the organ, and at others very superficially; and their development commences most frequently at the base of the organ. The tumour may be single or exist in considerable numbers. Sometimes several isolated indurations in the process of growth become confounded together so as to constitute a single tumour. The size has varied from that of shot to that of a small walnut, and in a case occurring to M. Cloquet the tongue became so enlarged as to descend three inches below the chain. In general the form of the tumor is more or less rounded, and its colour is grey or white, although that is not always the case. Of an almost cartilaginous hardness at first, as the tumour approaches the surface it presents more of a pasty or gummy consistence and on bursting gives rise to ulceration. As these tumours do not prove fatal, their texture cannot well be judged of, but it is to be supposed that they do not materially differ in this respect from syphilitic tumours developed in the muscle and cellular tissue of other parts of the

body. The excavated ulceration which follows the opening of the tumour is of variable depths, according to the position of the latter. It is of a more or less elongate form, with irregularly sharp cut edges and presents a greyish bottom covered with pseudo-membranous exudation, and bleeding easily from contact of the teeth. Induration at first surrounds the base, but this gradually somewhat diminishes. When several of these ulcers become joined together, considerable portion of the substance of the tongue is destroyed, and a serious deformity remains even after cicatrization. When, however, the syphilitic tumours become arrested by suitable treatment while still in the condition of nodosities they gradually lose their consistency, and leave behind them no signs of their former existence.

Symptoms.—Many of these have been already alluded to in detailing the appearances furnished by the tumours; of course there is difficulty of speech and deglutition proportionate to the size of the tumours. The pain is usually but slight, or even does not exist especially in the early stage. Although the occurrence is quite exceptional, the submaxillary glands sometimes undergo enlargement on the breaking out of ulceration. When there is great tumefaction and projection of the tongue, salivation is one of the consequences. The evolution of this affection of the tongue is eminently chronic, its commencement being often referred to a period of many months distant.

Diagnosis.—This is of the highest importance, for the affection has often been confounded with other lesions. Among these *cancer* is pre-eminent. Several patients cured of frightful-looking syphilitic ulcers, have been regarded as instances of recovery from cancer of the organ while the tongue has been amputated for reputed cancerous ulcerations which would have yielded to iodide of potassium. In distinguishing between the two affections we are greatly aided by the fact of the pre-existence or co-existence of other syphilitic symptoms, a fact which prevailed in nine out of ten cases here given. Cancer of the tongue is attended with lancinating pain, and its preferential seat is not the base but the point or edges of the tongue. It is usually single while syphilitic tumours are mostly multiple. Cancer usually first shows itself as a hard circumscribed watery tumour, which is not the case with the syphilitic tumour which assumes a more regularly roundish form. Consecutive glandular swellings are rare in the syphilitic affection; but cancer, when somewhat advanced, implicates the surrounding glandular tissue. The tendency of the syphilitic tumour is toward the surface, where it softens and ulcerates, while cancer involves the deep seated as well as the superficial tissues. The ulceration from cancer is generally single and more or less fungous, while the ulcers following syphilitic tumours are generally multiple and excavated, with sharp, irregularly cut edges, and a greyish diphtheritic, partially gangrenous bottom. The early induration of their base gradually disappears as the plastic matter becomes softened and excreted at the surface of the ulcer. Cancerous engorgement is persistent, for in proportion as the morbid product is destroyed by ulceration, the disease spreads to deeper and deeper parts. Both forms of ulcer bleed from contact with the teeth; but the syphilitic is less fungous and less vascular than the cancerous. (2.) *Tubercle* going on to ulceration is not very uncommon in the tongue in phthisical or scrofulous subjects; and in such cases error may arise without much difficulty. These steatomatous tumours have usually less consistence than have the syphilitic. (3.) *Cullosities hypertrophy of the epithelium stylosis lingua*. These terms indicate a condition described by M. M. Ullmann and Buzenet as occurring on the tongue of inveterate smokers. The mucous membrane becomes adherent, and beneath it is deposited a plastic exudation, presenting a firm whitish insensible surface. This layer of plastic deposit and epithelial cells cracks and becomes detached in fragments, bringing into view a painful irregular ulceration of greyish aspect. But although this appearance somewhat resembles that caused by those syphilitic tumours which induce a whitish projection at the surface of the tongue, these latter are not found at the surface, but in the substance of the tongue. The ulcers which follow the detachment of these plastic deposits do not at all resemble the deep excavations which follow the syphilitic tumour. (4.) *Hypertro-*

phy of the tongue and (5) *Glossitis* are easily distinguished from syphilitic tumours. (6.) *Primary chancre of the tongue* is usually easily distinguishable by the history of the case.

Prognosis.—This in the case of suitable treatment being had recourse to, is usually favourable ; but if this be too long delayed, the destructive ulceration which ensues will be followed by more or less permanent deformity.

Treatment.—Various forms of mercurial preparations have been used by different authors with success ; and although the author believes that iodine is useful in some cases in which mercury has been already employed in vain, he does not agree with M. Ricord in the propriety of proscribing the latter, or even, as a general rule, in substituting iodide of potassium for it.—*British and Foreign Medico-Chirurgical Review.*

PRACTICAL OBSERVATIONS ON THE NATURE AND TREATMENT OF PROSTATORRHŒA.

By PROF. GROSS, Philadelphia.

Prostatorrhœa is defined to be a discharge from the prostate gland, generally of a thin mucous character, dependent upon irritation, if not actual inflammation, of the component tissues of that organ. It does not often occur among children or old people, but is most common during the activity of the sexual organs, and is most frequently met with in those whose sexual propensities are the strongest. The exciting causes are not always evident, but the disease has generally been traceable, either directly or indirectly, to venereal excesses, chronic inflammation of the neck of the bladder, stricture of the urethra or some affection of this canal ; it may have its origin in diseases of the rectum, and the use of internal remedies, as cantharides, turpentine, may excite a temporary prostatorrhœa ; a common cause in young men is masturbation. The *symptoms* are a discharge of mucus, generally, perfectly clear, ropy, varying from a drachm upward in twenty-four hours ; in efforts at defecation the flow is greatest : It is attended, also, with a pleasurable, tickling sensation sometimes. Prostatorrhœa may be distinguished from urethritis by the gradual supervention of symptoms, the transparency of the discharge, the absence of symptoms of inflammation of the urethra, &c. ; spermatorrhœa by a microscopical examination of the discharge ; from cystorrhœa by the absence of changes in the urine, or difficulty in micturition. The *pathology* of this affection consists in a disorder of the follicular apparatus, leading to an inordinate secretion of its peculiar fluid. This may be due to inflammation but in some instances the organ appears to be entirely healthy, in which case it is supposed to be due to a heightened functional activity. The *prognosis* is generally favorable as this affection is not a disease but a symptom of disease, usually slight and easily removed ; it is often however, very obstinate, and when the mind deeply sympathizes with the local affection is very difficult of management. The *treatment* should be directed to the removal of the cause, and to this end there should be a thorough exploration at the genito-urinary apparatus, the anus and the rectum, and a careful inquiry as to the habits of the patient. If he is weak, gentle exercise, nutritious diet, wine and tonics are indicated. The tincture of the chloride of iron in union with tincture of nux vomica is especially recommended. If he is alethoric the antimonial and saline mixture is useful. The most useful topical applications are cooling and anodyne injections, as Goulard's Extract with wine of opium in the proportion of one or two drachms each in ten ounces of water, three times daily ; in obstinate cases cauterization once a week may be necessary ; the cold hip bath is also important, and if the symptoms do not yield, leeches should be applied around the anus and to the perineum.—*N. A. Med. Chir. Rev.—from Ann. Med. Times.*

MIDWIFERY,

WHETHER A WOMAN CAN BE IGNORANT OF HER PREGNANCY.

In the year 1852, I attended a young married woman, aged 19 and delivered her from her first child, under the following circumstances:—I was hurriedly sent for to visit her, it being supposed that she was labouring under inflammation of the bowels. On my arrival I found her free from fever and all inflammatory symptoms; but I had not been long with her before she had a violent labor pain; another and another followed. I examined her abdomen, which I found somewhat enlarged. I took her mother aside and expressed my fears that the patient would miscarry. She smiled and said she was sure her daughter was not pregnant at all. She had never had any symptom of it, had never felt any motion as of a child in the womb and no preparations had been made or were making in the way of providing clothes for the infant. I administered an opiate with the view of preventing the miscarriage, but on my return, two hours afterwards, I found labour had progressed steadily, and she was soon delivered of an exceedingly small infant apparently still-born; but by use of the hot and cold bath alternately, I had the satisfaction of handing over to its unbelieving grand-mother a living child, and I may add that that it is now a strong, healthy boy, 8 years old. This was certainly the smallest living infant I ever saw; it could not have been from its appearance more than six months and a half in utero. On cross-examining the mother of the child, she assured me she had not the most remote idea that she was pregnant, and had never felt any movement or other peculiar feeling in the abdomen. The enlargement of the belly (which was not very great) she had never paid any regard to. Having been very delicate before her marriage, her catamenia had been extremely irregular, so that no exact data could be obtained as to the duration of the uterine life of the infant. The patient moved in the middle ranks of life and was in every respect thoroughly trustworthy, and, from what I know of her, I feel assured she would conceal nothing from me. Being a married woman, she had no reason to conceal anything, but, on the contrary, felt proud of her offspring. In further confirmation of the unexpected nature of the event, I may mention that as it happened on the 1st of April, considerable difficulty was experienced with some of her friends in convincing them of its truth. This case then, I think proves that a woman *can* remain in ignorance of her pregnancy up to the *very* time of her delivery, and is, perhaps, worthy of a place in your columns.—*Letter of R. Scott Orr, M.D., Dispensary Physician to the Glasgow Royal Infirmary, in Lancet.*

INTRA-UTERINE FRACTURE OF THE CLAVICLE.

The patient was delivered naturally, after an easy labor, of a good sized male child without the attendance of a physician. A few days after, having taken upon herself the task of washing the infant, she detected a projection on the left side, between the shoulder and sternum. Upon the examination, the presence of a perfectly consolidated fracture of the clavicle was ascertained the apex of the angle of junction pointing upward. From the fact of so short a time having elapsed from the birth of the child, and the complete union at the point of fracture it was evident that the solution of continuity must have taken place some weeks prior to the completion of pregnancy. The mother had, some three or four weeks before her confinement, received a violent blow in her left side from the edge of a door.—*Dr. Wm. B. Atkinson, in Medical and Surgical Reporter from Boston Med. Jour.*

THE
British American Journal.

MONTREAL, AUGUST, 1860.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

At a meeting of the general committee on education held in London on the 19th June, two important resolutions were adopted; one of which is similar to the regulation of the College of Physicians and Surgeons of Lower Canada. This one is "that all students pass an examination in general education before they commence their professional studies," and the other defines what testimonials in substitution of that examination shall be accepted, among which we find "a degree in arts of any University of the United Kingdom or of the Colonies." This preliminary requisite should be fully understood by all gentlemen who propose to complete their professional education in the mother country, and graduate there. It was furthermore resolved that students who cannot produce such a testimonial must pass an examination in Arts, to be conducted by a special Board of Examiners in Arts.

At a meeting of the general medical council held on the 20th, it was decided that "the license of the Apothecaries Hall of Ireland was not equivalent to a degree or license in medicine from a University or College authorised to grant such, as there does not appear to be any provision or authority for examining in medicine."

At this meeting a letter was read from Mr. Alexander Fiddes, practising in Jamaica W. I., complaining that the medical bill lately passed by the Legislature of that island and requiring the registration of every practitioner, interfered with his privileges as an F.R.C. S.L., the diploma of which entitled him to practice in any part of her Majesty's dominions, and requesting the interference of the Council to prevent its receiving Her Majesty's assent unless modified. The Council appears to have interfered, the result of which was a letter stating that the Colonial Legislature would be called upon to amend the act in that respect before it could receive the Royal assent.

It is our opinion that if the medical profession of Jamaica have sought a legal defence of their interests in a Medical Bill, the compliance with the rule of mere registration would have been a simple affair on the part of Mr. Fiddes, who on going to that island to earn his living ought to have had no compunction in

submitting to those restrictions, which the profession there have no doubt found it necessary to establish. We do not think that Mr. Fiddes' act savours much of dignity. The bill however is certainly objectionable in one respect, as it prevents Army and Navy medical officers from giving evidence in Courts of Law, not only ignores their qualification as medical practitioners, but subjects them to penalties, unless registered in accordance with its provisions. What could possibly have been the motive for the introduction of such a clause we cannot divine.

At a meeting of the Committee on Education held the same day, a further report was presented on the registration of students; and it was resolved that "after October 1st 1861 all medical students shall be enregistered," that the lists of students registered shall be closed within 15 days after the commencement of each session or term," and "the licencing bodies shall have power to admit exceptions as to the time of registration and shall transmit information of the same with the reasons, to the Branch Council where these exceptions have taken place. The schedule of enregistration is to specify the following particulars; name, date of birth, place of birth, present residence, date of registration, place of registration, registering body, and who and by what body the examination in Arts was conducted and its date.

At a meeting of the special Registration Committee held on the 21st, five applications from Homœopaths for registration were presented; viz, from Henry Thomas, and Thomas Smith, graduates of the Homœopathic College of Pennsylvania: and Samuel Eadon, James Coombs, and John Marchant Davison from the Homœopathic College of Cleveland, Ohio. Of these, Thomas Smith did not profess to have been examined in the College named, and the committee at once and without hesitation rejected his claim. Henry Thomas addressed to the Registrar and the members of the Branch Council for England a threatening letter of prosecution for damages in the event of his claim being refused. After considerable discussion, as to whether the act contemplated the registration of such degrees, it was finally resolved to submit it as a question to the Attorney General, whose opinion had not been given up to our last date.

On this point we have to remark, that if the Attorney General of England gives his opinion as to the construction to be put upon the medical law of Great Britain, his action will be in singular contrast to that of one of our own Attorney Generals in this country, who not only declined to express any opinion at all on a point of construction or operation of the law, submitted to him by the College of Physicians and Surgeons of Lower Canada, but did not even deign to acknowledge the reception of the letter conveying the interrogation.

The General Committee on Education met the same day and resolved "that the age of 21 be the earliest at which any professional licence shall be obtained; that four years of professional study shall be required after the examination in general education, and that the professional examination should be divided into at least two distinct parts; that the first be not undergone until after the termination of two years of study, and the final examination not until after the termination of four years of study."

The medical act provides that at these examinations any member of the Council be present, or the council may depute any person to serve in his stead on this

duty. It was resolved that after all examinations wheresoever held, returns shall be made of the names of successful candidates, and that the names of rejected candidates shall be confidentially communicated to the registrars of all the other licensing bodies with as little delay as possible.

A committee consisting of members from Dublin, Edinburgh and London has been appointed to revise and prepare a new "British Pharmacopeia." A report presented to the meeting announced considerable progress, and it was expected that the work would be ready for the press by the middle or latter end of November next.

We have thus epitomized such portions of the transactions of the General Council as we thought might prove useful to the profession of this Province. The whole proceedings are invested with very great interest.

To the Editor of the "British American Journal," Montreal.

SIR,—My attention has been drawn to an article in your medical *Journal* for July, regarding the qualifications, necessary by law for a medical practitioner to have, who practises in Upper Canada, and in that article an unsparing and defamatory method has been unjustifiably adopted by you towards me in my official position as Clerk of the Peace, and a similar plan adopted towards our worthy sheriff, Robert Moderwell, Esq. You could not of yourself I am to suppose, have so referred to those officials, unless some correspondent had communicated with you. Your correspondent has misled you. I have never said or done anything derogatory to your medical profession (a profession which I esteem highly) nor to your "College of Physicians and Surgeons," and I am certain that Mr. Moderwell has not done so either.

Dr. Peter R. Shaver has practised here for a few years, and in a *private* and friendly conversation with him and his assistant in his shop, the subject of "Licenses" was introduced. As he had not (as he then for the first time stated to me) the governor's license to practice in Upper Canada, he held that the diploma or certificate from McGill College of Montreal and from the "College of Physicians and Surgeons" of said city, entitled him to practice in Upper Canada without the governor's sanction, and I simply disagreed with him, and held a different opinion. He was simply *unlicensed* according to the laws of Upper Canada. Dr. Shaver has the diplomas or certificates from each of these institutions in his favour (printed in latin) framed and hung up in his shop. I put my opinion in the form of two questions, a copy of which I left at Dr. Shaver's with a note, and liberty is given to produce and publish what I so wrote. It was most ungentlemanly and also ignorantly done, for any other information as to the fact, to be made to you. The two questions I stated were as follows: "Query 1—Is it *necessary, by law*,—for any medical practitioner, before he commences to practice in Upper Canada, to have the governor's license? Query 2—If the practitioner shall only have the common or ordinary diploma (or certificate) by any Medical Board or College, in Upper Canada,—can he *without the governor's license*, practice legally?"—and reference was made to

chap. 40, page 436 of Consol. Statutes for Upper Canada, and to form of indictment against unlicensed parties. This was on the 23rd of June.

Notwithstanding what you have written in your July number and of what has been written by you to the *Northern Advance* at Barrie C. W. (1st August) I am inclined to adhere to the opinion that the governor's license, for practising the medical profession in Upper Canada is necessary. The three exceptions in the act chap. 40 are of course excepted, viz. 1. Homoeopathist. 2. Naval and Military Physicians or Surgeons actually employed, and 3. Midwives. I refer you to the words in the statute 4 and 5 Vic. chap. 41 (Consol. Stat. U. C. page 437) "but subject to the laws to which other practitioners are subject in the portion of this province in which he practices." The same words nearly, are also in the Consol. Stat. of Canada chap 46, page 869. If your Body the "College" allows a licensed practitioner of Upper Canada to practice in Lower Canada, *without conforming* to your medical laws of Lower Canada which regulate the medical profession, you do so *by sufferance merely*—You can exact a legal compliance, if your body chooses—And you do so, in the following respect, as I am informed, namely, the act 10 and 11 Vic. chap. 26 section 2, part 3, authorises your "College to cause every member of the profession now practising or who may hereafter practice in Lower Canada to *enregister* his name, age, place of residence, nativity, the date of his license and the place where he obtained it, in the books of the College. That is *one of your laws* of Lower Canada, and therefore the above clause of 4 and 5 Vic. chap. 41, subjects all practitioners to obey And *one of our laws* of Upper Canada is, that no one can practice in Upper Canada without a license from the governor no, even though licensed or diplomated by *any College* in Upper Canada, or by *any other College* in her Majesty's dominions, 8 Geo. 4 cap. 3 sec. 2, (Consol. Stat. p. 437), the exceptions referred to, being excepted. I do not choose to dwell on the unequalness of the laws, which you also refer to, whereby practitioners in Upper Canada are compelled to have the governor's license, but for practicing in Lower Canada, the license of your "Provincial Medical Board," (College) is enough, which latter appears to be the law *as regards Lower Canada* 12 Vic. cap. 52 sec. 3. There are licenses however extant, by a governor general which authorises a practice in all Canada. I have seen such.

As the law stands in Upper Canada, I conceive I am right, and that others, and even those of your own Body of your College of Physicians and Surgeons, have entertained their *doubt* and asked for legal opinions, your own Journal of April and May, (Semi-annual meeting) and July, shows too plainly, and such being the case, should have induced some greater degree of modesty by you towards those who may very justly differ with you. A perusal of your said article of July would induce an opinion, and a just opinion, derogatory to your position as a physician. Dr. Shaver *assumed* a position when he prosecuted by indictment a practising physician of this place, Dr. David Waugh, who does not hold (I believe) the governor's license any more than Dr. Shaver himself.

I am, sir, yours, &c.

J. J. E. LINTON.

REPLY.

Independently of the foregoing, and by way, we presume, of giving as much currency as possible to his lucubrations, Mr. Linton has seen fit to *advertise* his letter in the Montreal Pilot, an evening newspaper of note in this city, with some prefatory remarks based upon an extract from our own leading article in our April number, and to the effect, "that the attention of the *Attorney General West* had been called to this question, who stated that "there was some room for doubt, and that the question is one to be decided by the Courts of Law, and that preceding such decision any person practising in Upper Canada, on a License from the Licensing Board of Lower Canada alone must do so on his own responsibility." We will now exhibit the peculiarity of Mr. Linton's *honesty* in quoting. Any one would suppose that this was the tenor of our article on the subject. But far different is the fact. On the next page of our journal and in continuation will be found the following: "on this subject *we are authorized* to state that these officers do not consider themselves in duty bound either to prosecute for, or give opinions on the construction of the Law to Corporate bodies, but that they think it the better course to leave corporations or individuals to prosecute their own cases, and that if *this is done in reference to the disputed point, the Courts of Law must decide in favour of the value of the college licenses WITH COSTS.*" Mr. Linton's honesty in quoting just so much of an editorial as suits his purpose is thus shewn. In controversy we can recognise no more reprehensible, we were going to say contemptible, practise than this.

Mr. Linton accuses us of "defaming" him. This we deny in toto; and we opine it will be difficult for him to show it. If proving that a Law officer is ignorant of the Law is defamation, then we certainly plead guilty, and to this we adhere. Nor do we think that Mr. Linton has afforded us any grounds for altering that opinion.

Either the act which enables a Licentiate of one Province to practice in the other is of some effect or of none. If the latter, then the sooner it is expunged from the statute book the better, and to this complexion would it come if a Licentiate were compelled to take out another license in that Province in which he proposes to dwell. But the licenses are in both cases *bona fide* and good, and the act alluded to expressly declares, and this in terms so plain that he who runs may read it, that "any person who is or shall be duly licensed or authorized "to practice as a Physician or Surgeon, or both, either in that part of the Province called Upper Canada or in that part of the Province called Lower Canada, under the laws in force in the said portions of this Province respectively, "shall be, and is hereby authorized to practice in any part of the Province." But now come the Pons Asini.—The act further declares "but subject to the "laws to which other practitioners are or shall be subject in the portion of the "province in which he shall practice." If according to Mr. Linton this means that the already licensed individual must take out another license before he can practice, it is perfectly plain that this last clause would then negative the obvious intention of the whole Bill, which was the very opposite; and well might we have exclaimed at such a piece of legislative absurdity. No: it implies in few words, that the licentiate shall conform to all those regulations or laws which the

Profession may have enacted for its own benefit "in the portion of the Province in which he shall practice." For example; had the the registration Bill, proposed at the last session of Parliament become law in Upper Canada, the licentiate from Lower Canada would have been forced to obey its provisions like all the other members of the Profession; and in Lower Canada if the College of Physicians and Surgeons had put in force its own registration clause, the Licentiate coming from Upper Canada would have been compelled to conform to it. This is the only possible construction which can be put upon the clause; and that such was the intention we happen to know, as we had something to do with the paternity of the Bill. Any other construction would infallibly nullify the act.

With these remarks by way of preface we give the following replies to Mr. Linton's two questions. To No. 1. It is necessary for every medical practitioner to be licensed. To No. 2. He cannot.

We confess that we cannot understand Mr. Linton's observations, about what he terms the "unequalness of the laws." Does he think that there is any inferiority in the one with regard to the other. We assure him we should much rather prefer the license of the College, with the privilege of appending to our name the magical letters L. or M. C. P. S., to the "Governor's license," as he calls it, and a blanc. In reality, however, there is no difference between them, that we have ever heard of, as far as rank is concerned.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The Association this year has held its annual meeting at Oxford. The subsection on physiology was opened by the Linnæan Professor of Physiology in the University, Dr. Rolleston, in a most eloquent address. Among the papers read in this section was one by Dr. Gibb, lately of this city, and now of London, on "Saccharine Fermentation in the Human breast," and its influence on the child. We take the following abstract of his remarks from the *Lancet*, which has reported in a general manner the proceedings of this section. Dr. Gibb "shewed that from various causes of a constitutional nature, in which the nervous system played a conspicuous part, the saccharine element of the milk underwent fermentation at the moment of its secretion—and gave rise to the junction of two kinds of animalcules—the vibriones and monads. The milk containing them was unusually rich in sugar, but owing to the fact of its having undergone fermentation within the gland itself, its healthy character was destroyed, and it was not therefore capable of assimilation within the stomach of an infant, as evidenced by the most extreme degree of emaciation—in fact the child was undergoing starvation. The author has proved the correctness of his views in a series of experiments and researches into this question since 1854. In the discussion which ensued much credit was given to the author for his labours in this novel field of inquiry; and numerous questions were put to him in relation to the condition of the blood, and other fluids, in such conditions as he had described."

We should be happy to be made acquainted with Dr. Gibb's experiments and views more minutely.

ST. PATRICK'S HOSPITAL.

As an independent Institution, this Hospital has ceased to exist; but a certain number of wards, under the same name, have been opened, in the large and commodious new building lately erected by the Ladies of the Hôtel-Dieu in St. Lawrence Main Street near the toll gate. This building has received the name of "Hospice de la Saint Famille," and is admirably located in one of the healthiest parts of the environs of the city. All the patients who were in the St. Patrick's Hospital at the time of its closure have been removed to it, and in a short time the patients of the Hôtel-Dieu hospital will also be conveyed there.

Consequent upon these changes, the medical staff has been materially altered. Drs. Macdonnell and David have retired, and the whole establishment has been placed under the personal charge of the Lecturers of the Montreal School of Medicine, who have associated with them Dr. Hingston. The latter gentleman is a practitioner of excellent standing in the city, and, although we cannot but regret the retirement of the two gentlemen previously alluded to, we are still warranted in trusting that the intention for which the hospital was originally established will not suffer.

 NEW SYDENHAM SOCIETY.

We have received a notice from the secretary of the above society, intimating that the council have finally decided upon the issue of Hebra's magnificent Atlas of plates (life size) of Diseases of the Skin, and part of it is already in preparation.

The society already numbers 2,828 members. The number of members (3,000) considered requisite for the successful carrying out of this work not being yet reached, the council request the continued exertions of individual members to endeavour to obtain other subscribers.

Vols. 6 and 7 are in course of issue, and vol. 8, a year book, of medicine surgery and the allied sciences, for the year 1859, are in the binder's hands. Copies of the series for 1859 (Vols. 1 to 5) may still be obtained by new members. Those members who have not yet forwarded their subscriptions for the current year are requested to do so without delay. Dr. Fenwick, of this city, the honorary local secretary for Canada, will afford all information required. We advise all interested in the science of medicine and surgery to reconsider the claims of this society on their support.

 "CARCINOMA OF THE PENILE ORGAN."

MR. EDITOR,—I see in a late number of the Lancet a case named "Carcinoma of the Penile organ." Is this the same thing as "Cancer of the Penis."

Be kind enough to announce in your next issue and oblige,

AN IGNORANT SUBSCRIBER.

MONTREAL, *August 1st*, 1860.

(We insert the above with no little pleasure, indicating as it does on the part of our correspondent an inquiring mind, and much correct taste. The high

flown terms which "A Subscriber," (we cannot adopt the prefix,) so quietly censures, is not creditable in these days of sound scholarship, and common sense, and would almost justify the republication of Dean Swift's celebrated caricature of professional pomposity in his day. The name must have been given to the article, which appeared in the *Lancet* under the above inflated heading, by some student reporting a case admitted into University College Hospital under the care of Mr. Erichsen, and who seized the opportunity to shew off his learning. Mr. Erichsen we are persuaded never saw it, and the only wonder to us is that the *Lancet* admitted it. ED. B. A. J.)

OBITUARY NOTICE.

Death has been busy among the great ones of our Profession during the last several months. We have now to chronicle the decease of Dr. Addison aged about 67, and whose name will survive in connection with the *Morbus Addisonii*. He was born at Newcastle and graduated at Edinburgh in 1815. He then went to London, and was appointed Surgeon to the York Hospital where he soon acquired a high reputation in the treatment of syphilitic diseases. Becoming subsequently a pupil of the celebrated Bateman, he rapidly acquired a thorough intimacy with cutaneous diseases, rivalling his preceptor in this branch of medical science afterwards. It is said that he had scarcely an equal in diagnosing these peculiar affections. In 1824 he was appointed Assistant Physician to Guy's Hospital, in which he introduced to London notice the splendid discoveries of Laennec in the auscultation of thoracic diseases. In 1827 he was appointed lecturer on *Materia Medica*, and rapidly obtained, from the interest which he compelled his pupils to take in that dry subject, and from the peculiar mode of his teaching, the best class in London. In 1857 he was appointed Physician to the Hospital, and at the same time joined Dr. Bright in the chair of Medicine; and it is not a little singular that both these gentlemen should have discovered, and had their names attached to, new diseases. Conjointly with Dr. Bright he published a work on medicine, one volume only of which appeared. Addison's other contributions to medical literature, considering the vast extent of his knowledge, were not numerous. He contributed largely however to the *Guy's Hospital Reports*, a very great number of the papers in which are from his pen. He died at Brighton, on the 29th June, universally lamented.

ABSTRACT OF METEOROLOGICAL OBSERVATIONS AT MONTREAL IN JULY, 1860.

By Archibald Hall, M.D.

Day.	DAILY MEANS OF THE										THERMOMETER.		WIND.		RAIN AND SNOW.			GENERAL OBSERVATIONS.
	Barometer corrected and reduced to 32° Fahr.	Temperature of the Air.	Dew Point.	Relative Humidity.	Ozone.	CLOUDS.		Maximum read at 9 P.M.	Minimum read at 7 A.M.	Direction and Force from 0 Calm to 10 Violent Hurricane.	Rain in 24 Hrs read at 10 A.M.	Snow in 24 Hrs read at 10 A.M.	Total rain and melted snow					
						Amnt.	General Description.											
1	Inc's.	o	o	0.100	0.10	0.10		o	o	o.10	Inch.	Inch.	Inch.					
29	946	68.7	49.6	49	1.0	1.3	Cir. St.	75.8	55.6	W. S.W.	2.0	Inap.	Inap.	Aur. stream. N.E. & W., 1 a.m.				
30	951	63.1	48.5	46	1.0	1.9	Cir. St.	76.9	57.5	W. S.W.	1.6			Solar Halo.				
31	954	70.7	50.4	65	0.7	2.3	Cu. St.	85.4	61.7	S.W.	2.3							
1	947	68.9	45.3	39	1.2	3.0	Cu. St.	73.2	62.8	N. N.E.	3.0							
2	925	70.7	52.2	52	1.0	3.0	Cu. St.	81.0	58.0	E. S.E.	2.6							
3	925	72.5	57.4	63	1.0	3.0	Strat.	82.6	53.5	N.	1.6							
4	909	71.1	53.4	54	1.0	0.9		81.6	59.0	S.W.	1.6							
5	909	71.8	53.2	57	1.0	0.9		78.5	59.6	S.	4.3							
6	908	70.2	61.5	66	1.0	0.9	Cu. St.	76.7	65.0	W. S.W.	4.0	0.04	0.07	Thunderstorm at noon.				
7	901	70.8	61.5	66	1.0	0.9	Cu. St.	70.6	59.5	W. N.W.	1.6	0.39	0.39					
8	832	63.2	56.4	63	1.0	0.9	Cu.	71.6	54.0	W. N.W.	1.3	0.15	0.15					
9	975	63.0	47.3	66	1.0	0.9	Cu.	75.1	54.0	W. N.W.	2.0	Inap.	Inap.					
10	949	67.0	52.5	63	1.0	0.9	Cu.	80.5	59.0	N. W.	1.0							
11	981	71.5	52.5	52	1.0	0.9	Cu.	81.3	59.0	N. W.	2.6	0.04	0.04					
12	936	73.9	53.8	55	1.0	0.9	Cu.	83.8	64.0	W. S.W.	3.3							
13	866	76.4	60.0	61	1.0	0.9	Cir. Cu. St.	82.8	66.0	S. S.W.	2.6			Thunderstorm.				
14	651	72.6	61.4	71	1.0	0.9	Cu. St.	75.5	56.5	N. W.	2.6	0.17	0.17					
15	810	68.2	57.4	60	1.0	0.9	Cu.	81.5	64.8	W. S.W.	3.0			Solar eclipse vis. ev. N. E. aur.				
16	838	73.6	57.7	70	1.0	0.9	Cu. St.	84.0	67.0	W. S.W.	3.0	0.08	0.08	Thunderstorm. Lightning.				
17	676	75.3	65.7	75	1.0	0.9	Cu.	78.6	58.6	W. S.W.	1.0			Faint Auroral Streamers.				
18	780	63.9	52.7	53	1.0	0.9	Cu.	77.9	51.0	W. N.W.	2.3	0.07	0.07	Thunderstorm.				
19	521	67.9	62.7	71	1.0	0.9	Nimb.	68.4	50.8	W.	1.6	0.13	0.13					
20	801	61.2	45.5	51	1.0	0.9	Cu. St.	74.1	54.2	S.W.	2.3			Thunderstorm. Aur. light.				
21	522	60.4	32.1	74	1.0	0.9	Nimb.	68.3	50.9	S.W.	5.0	0.06	0.06	Heav. gale p.m., doubl. rain.				
22	784	59.0	36.4	94	1.0	0.9	Nimb.	74.3	54.0	W. S.W.	2.0	0.42	0.42	Solar Halo.				
23	959	65.4	39.3	63	1.0	0.9	Cu.	75.3	58.5	W. S.W.	2.6	0.06	0.06					
24	738	65.1	59.8	62	1.0	0.9	Nimb.	69.3	52.5	N. W.	2.0	0.65	0.65					
25	591	61.4	42.6	62	1.0	0.9	Cu.	72.4	56.0	S.E.	1.0							
26	607	64.2	57.7	70	1.0	0.9	Cir. St.	73.4	59.0	S.	4.0							
27	782	64.5	57.7	69	1.0	0.9	Cu. St.	78.2	66.0	W. N.W.	1.6	0.06	0.06					
28	715	68.1	62.3	86	1.0	0.9	Cu. St.	83.0	57.0	N. W.	2.6							
29	739	63.3	53.9	77	1.0	0.9	Cu. St.											
S's								76.74	57.87									
M's	29.816	68.12	55.20	657							1.72		1.72					

ABSTRACT OF METEOROLOGICAL OBSERVATIONS AT TORONTO IN JULY, 1860.

Compiled from the Records of the Magnetic Observatory.

Day.	DAILY MEANS OF THE						THERMOMETER.		WIND.		RAIN AND SNOW in 24 hours, ending at 6 A.M. next day.			GENERAL REMARKS.
	Barometer reduced to 32° Fahr.	Temperature of the Air.	Relative Humidity.	Amount of Cloudiness.	CLOUDS.		Maximum read at 9 P.M.	Minimum read at 7 A.M.	Direction.	Mean Velocity in Miles per hour.	Rain.	Snow.	Total rain and melted snow.	
					Amnt.	General Description.								
1	Inches.	o	0-100	0-10	o	o	o	o	o	o	Inch.	Inch.	Inch.	
29	6547	65.37	73	5	69.2	59.2	59.0	59.0	N.	6.60	6.60			
30	4085	63.07	74	5	73.0	54.2	59.0	59.0	S.	3.84				
31	3167	61.98	90	10	63.2	60.0	63.0	63.0	S.	5.46	.115			
1	4052	61.57	74	8	69.4	60.5	61.5	61.5	E.	9.28	.870			Severe thunderstorm 4 p.m.
2	6405	61.52	64	3	72.0	54.7	57.0	57.0	E.	7.52	.005			
3	6110	65.78	65	1	58.5	53.7	52.0	52.0	E.	6.53				
4				1	73.6	52.5	49.8	49.8	E.	7.1	5.50			
5				1	71.4	52.0			E.	6.65	.480			
6				1	72.8	63.2	62.0	62.0	E.	8.8	12.43			
7	3645	55.33	79	6	70.5	52.2	56.5	56.5	W.	5.15				Thunder 5 p.m.
8	6168	55.07	79	6	68.0	49.6	57.0	57.0	W.	8.07				Auror! light and streamers.
9	7948	59.88	63	3	70.4	50.2	53.0	53.0	W.	8.72				Faint Auroral light.
10	8177	62.42	63	3	72.5	52.5	47.0	47.0	W.	3.93				
11	7470	63.75	75	1	77.0	52.0	56.5	56.5	W.	6.52				
12	6730	64.70	74	1	77.0	55.6			W.	4.81	.075			Sheet lightning all evening.
13				4	83.8	63.2	61.5	61.5	W.	11.49	.018			Th. storm, a.m., sev. gale N.W.
14	4055	63.39	72	4	72.5	53.0	57.5	57.5	W.	4.45				Faint auroral light.
15	6538	62.85	74	7	71.2	55.0	57.0	57.0	W.	4.35	.510			Sun eclipsed, th. st. at night.
16	5252	63.18	89	5	88.0	62.7	65.5	65.5	W.	8.93				Aur. light.
17	4394	75.00	70	5	81.8	61.0	69.0	69.0	W.	4.97				Th. storm, a.m., au. and str.
18	4392	68.93	64	3	76.0	62.2	55.5	55.5	W.	15.47	.475			
19	3237	66.93	64	5	70.0	54.2			W.	5.12	Inap.			
20				3	68.5	53.0	46.0	46.0	W.	13.23				
21	3842	57.68	65	8	74.5	43.8	48.0	48.0	W.	9.53				
22	5325	63.25	57	4	70.8	52.5	55.0	55.0	E.	4.06				
23	6435	63.26	71	4	73.6	60.0	64.0	64.0	W.	7.87	.169			Faint auroral light.
24	5880	67.37	80	7	66.0	55.0	48.0	48.0	W.	6.35				
25	5350	67.37	80	4	67.5	49.0	42.0	42.0	E.	7.25	.655			
26	5880	60.00	64	1	74.0	61.2			W.	7.25	.935			
27	7355	62.43	62	7	74.0	54.8	64.0	64.0	E.	2.93	.043			Heavy rain for 23 hours.
28	6735	61.27	64	2	72.0		42.0	42.0	W.	11.68				Solar halo 4 p.m.
29	4600								W.					Corona round moon.
30	5118													
S's											4.336			
M's	29.5640	63.02	72	4	73.63	55.85	55.51	55.51	N. 61° W.	7.33				