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THE

BRITISH AMERICAN JOURNAL,

DEVOTED TO

THE ADVANCEMENT OF THE MEDICAL AND PHYSICAL SCIENCES IN THE BRITISH AMERICAN PROVINCES.

EDITED BY

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THE

BRITISH AMERICAN JOURNAL.

ORIGINAL COMMUNICATIONS.

MEDICAL DEPARTMENT.

ART. I.—"*The new method of reducing Strangulated Hernia.*" By WOLFRED NELSON, M.D., Montreal.

The subject of reducing Hernia by suspending the patient by the legs, has frequently of late, been alluded to in the *London Lancet*, and is viewed by some as a very cunning and very novel practice. Now, this is a practice as "old as the hills;" nor is this to be marvelled at, seeing that common sense would lead one to suppose that by inverting the position of the intestines, the protruded portion would be drawn inwards by the weight of the bowels. This would seem to be a natural inference. However this may be, I can assert that this *novel* practice has often been adopted by the *habitans* or Canadian farmers, and not seldom with success, especially in old cases, and when the scrotal tumour has been very large, in which cases the abdominal ring is greatly dilated, its course direct and short.

In proof that this practice has long obtained, I beg to mention the following case which occurred in the first year of my practice. In the month of March, 1811, I was requested to see a man who was reported to be dying from strangulated scrotal hernia. The patient was over sixty years of age, and had for a long time been afflicted with this hernia, which generally yielded to a good shaking or being held up by the heels; but, on this occasion, the procedure did not succeed, notwithstanding, to repeat the words of his friends, they had given him a thorough shaking in this wise:—"*Deux hommes ont monté sur une table, l'ont pris par les jambes, et l'ont secoué fortement, mais les tripes n'ont pas rentrées comme elles le fesaient auparavant.*" "Two men stood upon a table and took him by the heels, and shook and jerked him right soundly, yet the guts would not go back, as they usually did."

I may as well relate this case, though I published it many years ago in the *Boston Medical Journal*. My proceeding in this instance, I believe, was indeed novel, at least I had never heard of the like before. The man had incessant vomiting, occasional hiccough; the scrotum exceedingly tender, and about the size of an ordinary bladder. Gentle, methodical, and persevering pressure, together with the application of ice, and a large dose of laudanum proved ineffectual. I told the patient and friends that the only chance—and that a slen-

der one—was in the performance of an operation. This was readily assented to, and I performed my first operation for hernia. A cautious incision was made from about an inch above the abdominal ring to the lower part of the scrotum, about six inches in length. A careful dissection brought me to the tunica vaginalis, on puncturing which, some dark bloody fluid spirted out. The bistoury was then ran up to the ring and down to the bottom of the scrotum, when the intestines bulged out, of a dark mahogany colour. The stricture was dilated as far as seemed prudent, but the intestine was still so distended that it could not be made to recede, nor could much manipulation be resorted to, as it seemed so soft and tender that the finger might, upon the exertion of any force, easily be pushed through. In this emergency, I punctured the bowel transversely with a lancet, when more than half a pint of liquid fæces escaped, with much flatus. The bowel at once collapsed, and was easily returned.

A moment's reflection convinced me that I had no cause for extreme self-gratulation upon my wonderful achievement! A diseased intestine, approaching to gangrene was pushed back into its cavity, being, besides, cut through its coats. I determined, however, to employ such means as might afford a chance of recovery, and with this view enjoined entire abstinence from eating and drinking, with the exception of a small quantity of water or broth every fifteen minutes, so that nothing could escape from the opening. Added to this, and to prevent all action or disturbance of the bowels, as well as to keep the parts in *juxta-position* a large and soft compress was laid over the inguinal region, and another over the whole abdomen, which was then well and gently compressed with a flannel bandage.

The next day found everything in a most gratifying condition; the chief complaint of the patient being with regard to hunger! He was, however, enjoined penance for twenty-four hours more, when a more liberal supply of broth would be allowed him until his craving should be sated. Several injections were administered without disturbing him, which brought away some fæces and flatus.

A fortnight later the patient went about his business, and, wearing a truss, lived for many years.

Remarks.—Having perused Travers' excellent work on injuries of the intestines a short time previous to the above case, I was satisfied that the bowel, dark and chocolate colored as it was, was not mortified, inferring this from its glassy or shining surface. In making the puncture I took care to divide the bowel transversely, thus lessening the chances of distension, and consequent accidents from the escaping of the contents into the abdominal cavity. The following observation by Mr. Travers also induced me to the performance of the operation; "if "the wound be incised or punctured, the intestine empty, or only moderately "filled, the size of the aperture small and its direction transverse, adhesion may "be expected."

This case having terminated so successfully led me to make further enquiry respecting wounds of the intestines, especially when the result of operations in hernia, and I learnt that the celebrated Desault had long before,—to use his own words—"been convinced by experience and particularly by dissection, that "the portion which forms the hernia never recedes from the ring, and that there

" is no reason to apprehend effusion into the abdominal cavity on the separation " of the eschar."

Benjamin Bell, eighty years ago, held all wounding of the bowels in great horror, and recommended that every tear or opening should be regularly darned up; and to be quite sure that all was right and tight, it were better to thrust one portion of the gut into another and stitch it neatly all round. In order that no mistake should occur, he published a well-executed drawing of the manner in which this handy job was to be accomplished.

Some thirty years later, his celebrated kinsman, John Bell, took him severely to task for his curious contrivance, and showed the extreme absurdity of such a proceeding. But before Benjamin Bell's time, the great German surgeon Richter, in his Elements of Surgery, used these sensible words: " That surgeon acts " most prudently in leaving the union of a divided intestine entirely to nature."

The distinguished Petit, commenting upon some of the remarkable cases of perforation of the bowels that had been much boasted of, correctly observes: Les " guérisons qui paraissent miraculeuses sont dues plutôt à la nature qu'à l'art."

John Bell again remarks, and in my opinion, most judiciously: " That if " there be in all surgery a work of supererogation, it is the operation of sewing " up a wounded gut." I may, by the way, be permitted to remark, that nothing has been written on the subject of wounds in general, to be at all compared with John Bell's valuable work on wounds, and although published fifty years since, every surgeon of the present day would derive from it the most useful information, such as he is not likely to get in a similar manner in any other quarter, even at the present day.

A country surgeon, at a distance from all advice, and fearing to operate sec. art., for a scrotal hernia, would, in my opinion, be justified, in the case of a large tumour, in puncturing it with a trocar to give vent to its contents, which are always of a liquid nature, and containing much gas besides. The gut being emptied, would recede, if Lawrence's words are true, and I take them to be perfectly true: " If the rupture should be made the highest point of the abdomen " the return of the parts and the removal of the other viscera from the neigh- " bourhood of the ring may be favored by gravity." It would be well to elevate the gluteai considerably the more to facilitate the return of the bowel by inducing as it were *internal traction*. At all events the hint is too valuable not to deserve attention.

P.S.—The following paragraph from the *London Medical Times* of the 22nd ult., is a most fit pendant to the foregoing article:—

" The following fact is worth noting, *à propos* of an operation for the reduction of strangulated hernia lately practised successfully by Mr. Jessop. Mr. Larry stated at the Surgical Society of Paris, that in 1849 he met with the following case at the Hospital of Gros-Caillon. A soldier, 23 years old, came into Hospital with strangulated hernia. Taxis was long tried, but in vain; and all the other usual remedies: operation seemed the only resource left. Mr. Larry determined, however, to try previously a mechanical manœuvre. He therefore had the man placed on a stretcher, and carried up stairs with his head downward. While being shaken by the movement of the porters, an assistant gently rubbed his abdomen, and another at the same time gently compressed the tumor. Before the top of the stairs was reached, the hernia was completely reduced.

Montreal, January, 1861.

ART. II.—*Muscular Fatigue.* By Wm. H. Hingston, M.D., L.R.C.S.E. Fellow of the Imperial Leopold Academy; Member of the Pollichia of Bavaria; of the Société Médicale Allemande of Paris; Surgeon to St. Patrick's Wards, Mont Ste. Famille.

The sensation of fatigue has been experienced by most persons. When within certain limits, it disposes to refreshing and invigorating sleep. When excessive, however, the feeling of *malaise*—nay, almost of pain, banishes for a time "Nature's sweet restorer." The physiological changes may be summed up in increased *débris* of muscular tissue, and its elimination from the system; increased exhalation of carbonic acid (which continues for some time after the discontinuance of the exercise which gave rise to it); and a slight elevation of the temperature of the body and particularly of the extremities. When the exercise has been excessive, and when fatigue has been the result, the exhalation of carbonic acid is diminished, and that of urea increased. But there is a *local* change connected with the excessive fatigue or over-exertion of the voluntary muscles to which my attention has been directed by the occurrence, among others, of the three following cases—a local change which I have not seen described in any pathological work within reach.

It may be that a more extended search than what my leisure afforded would have placed me in possession of facts or observations of such a character as to render these remarks unnecessary; but, so far, I am ignorant of any record of similar cases, or of any statement which could lead one to infer that *muscular inflammation* or myositis, as it is termed, may result from the violent exertion of a voluntary muscle. Pathologists, generally, speak of muscular inflammation but as either arising spontaneously, or (which is more frequent) resulting from the various injuries to which these organs are subject, whether incised, lacerated, punctured or gun-shots wounds, or crushing, rupture, stretching mechanical irritation or concussion as Rokitansky styles it. It may be the pleasing duty of some one of the contributors to the Journal to erect a theory, meanwhile I proceed with the illustrations.

Case 1st.—Occurred in the person of a medical gentleman of this city. Early in last autumn he started at full speed in pursuit of a passing vehicle, and overtook it after a rapid race of about a quarter of a mile; not, however, without severe fatigue in the most convex portion of the front of both thighs. On the following day, both recti were red, painful, and swollen midway between the pelvis and knees; the skin became darker and intolerant of the slightest touch; swelling gradually increased for a couple of days; remained stationary for about thirty-six hours and then gradually subsided.

Case 2nd.—G. B———, a small, thin, but healthy young gentleman took the field in the autumn of '59 with the Fox-hounds, mounted upon a very spirited powerful animal. The ride was long and fatiguing; during a portion of the day the racing propensities of his Bucephaloid could with difficulty be restrained. A few days afterwards pain of a severe lancinating character was experienced along the belly of the left biceps; the part became hot and red; an abscess formed, which was opened by the writer, and about two ounces of seropurulent

matter escaped. A couple of inches higher up a similar collection of pus took place; was opened in like manner; and a quantity of pus of like quality escaped. The abscesses filled very slowly and when the skin had healed the space occupied by the Coraco-Brachialis and Biceps was found to have softened away during the suppurative process. No areolar tissue was discharged at any time.

Case 3rd.—Mr. M———, æt. 24. A large, muscular farmer amused himself with other athletes one afternoon in the January of '58, lifting heavy weights in a *stooped* position. A day or two afterwards the back became so painful that all exertion was discontinued and I was sent for. I had never before seen the patient but his appearance was remarkable. His suffering seemed to be that of excessive *ennui* or fatigue. A dull heavy expression of countenance, flabbiness of the muscular tissue, and a feeling of lassitude when at rest, and of pain, especially in the back, when in motion. He rested in a semi-stooped position. My attention having been directed to the back, a red painful track was discernible along the right side of the vertebræ, extending from the ninth dorsal to the second lumbar. Careful manipulation led to a suspicion of the presence of deep seated matter, and on the introduction deeply of a trocar, a quantity of matter escaped, similar to that observed in the previous case. The matter continued to pour for several weeks. Pain was now experienced in the mesial line and to the left of it but whatever may have been the morbid action going on, no pus appeared in either of these situations. During the continuance of the discharge the patient was reduced very much; his appetite failed; and even with the aid of tonics, codliver oil, &c., his pulse, feeble and irritable, was constantly above 130, and he was with difficulty kept from sinking. But the discharge diminished and eventually disappeared altogether. His appetite returned, and with it, health and strength. I examined the spine carefully at my last visit, and the spinous processes in the region implicated could no longer be felt; they had in fact melted away.

The cases are here cited in the order of their severity and not of their sequence; the last mentioned having occurred first; and the first mentioned, last. In the order of severity we have occurring from violent exertion: 1stly. Inflammation with its usual signs, pain, heat, redness, swelling, and impaired function. 2ndly. Inflammation followed by suppuration of the over wrought muscle and, 3rdly. Inflammation and suppuration of muscles extending to, and causing the destruction of, a portion of the osseous framework to which they were attached.

Other cases present themselves to my mind, but the three already mentioned were so well marked, so unmistakably due to excessive muscular action, and illustrate and support as well as I could wish the propositions I have to make, that I willingly confine myself to them.

The discharge in both the cases which reached the suppurative stage was unmixed with dead areolar tissue. The muscular fibre alone seemed to have suffered, and in neither instance was it replaced; the cavities in Mr. B's arm and in Mr. M's back still remain, and though completely covered up with skin, the sudden sinking of the finger indicates clearly the site of former disease.

It might *à priori* be questioned whether the muscles of the voluntary system could continue to obey the mandates of the will beyond a certain limit,—beyond

the point, in fact, which would lead to their own disintegration and death. But pain is either a pathological condition, or an index to a pathological condition; and we all know we may continue in motion long after severe pain and fatigue would warn us to desist. In some of my peregrinations along the borders of the Hartz Mountains, with two companions, in years gone bye, a stipulated excursion through a grape country has led us to continue to tramp on, long after weariness and fatigue scarcely permitted us to drag our sluggish lengths along. 'Tis true that myositis did not follow but in one instance, but 'tis also true that the painful parts were favored when in motion. We know that by a strong effort of the will we may continue to gaze at the noonday sun till a retinitis, fatal to vision, supervene. The ear may be the recipient of sounds so harsh and so shrill, that the delicate auditory nerve is pained at hearing them, and *inflames* at their continuance: and it is the opinion of many that the human ear is incapable of appreciating sounds produced by more than 24,000 vibrations in a second, because, fashioned as it is, more rapid vibrations would be fatal to its integrity, and, perhaps, to that of the nervous system. But rather than enter into a disquisition on subjects so subtile and abstruse, which to some may appear foreign to the matter in question, and which have been introduced merely to illustrate the control of the will over our motions and acts, even after the developement of morbid phenomena, I return to the facts, and with the facts, as stated, certain propositions may be advanced. These are:

1st. That the sense of fatigue in the course of a voluntary muscle induced by unreasonable or violent exercise, accompanied by pain, heat, and discoloration of the part, is due to an inflammatory condition of the muscle or muscles implicated. (Case 1st).

2nd. That violent exercise of particular muscles may induce suppuration of the overwrought muscle. (Cases 2nd and 3rd.)

3rd. That suppuration is at the expense of the muscular fibre, the sarcolemma not participating in, and the areolar tissue remaining free from, the inflammatory process. (Cases 2nd and 3rd.)

4th. That inflammation affecting the muscular tissue implicates, by extension or contiguity, the aponeurotic expansion of the muscle. (Case 3rd.)

5th. That inflammation thus induced in a muscle may extend to the osseous structures to which it is attached. (Case 3rd.)

6th. That suppuration induced in an overwrought muscle may like the inflammation extend to neighbouring tissues and cause their destruction. (Case 3rd.)

7th. That muscular fibre lost during the suppurative process is not again replaced by muscular fibre. (Cases 2nd and 3rd.)

The only proposition advanced with hesitation and diffidence is the seventh.

One or more dissections were necessary to establish its correctness, but when it is borne in mind that muscles grow by an increase in the *bulk* and not in the *number* of the ultimate fibres, the impossibility of new muscle forming when the fibrillæ composing the old had disappeared, may be readily granted. Moreover, new muscle occupying the site of the old, would occupy or fill up the same space. In cases 2 and 3 it was not so. There was and is a sinking in, a

depression to mark the site of former suppuration which cannot be attributed to the atrophy of disuse.

The practical conclusion to be deduced from what has been stated is this: all exercise, to be beneficial, must stop short of fatigue.

10, Bonaventure Street,
Montreal, January, 1861.

PHYSICAL DEPARTMENT.

ART. III.—*Contributions to Meteorology, reduced from observations taken at the Observatory, Isle Jésus, Canada East.* By CHARLES SMALLWOOD, M.D., LL.D., Professor of Meteorology in the University of McGill College, Montreal.

The following observations embrace the past year, 1860. The Latitude of the Observatory is 45° 32′ North, and Longitude 73° 36′ West of Greenwich; the Cisterns of the Barometers are placed 118 feet above sea level; the *mean* results are obtained from three daily observations, taken at 6 a.m., 2 p.m., and 10 p.m.; these hours divide the civil day into equal periods of eight hours each. The usual corrections are applied for temperature and for any peculiar construction of the Instrument, the readings of which are frequently compared and verified so, as far as possible, to insure accuracy in the results.

Atmospheric pressure.—The *highest* reading of the Barometer during the year occurred at mid-night on the 18th of December and indicated 30.649 inches, which was .077 of an inch less than the highest reading of the year 1859; the *lowest* reading took place at 2 p.m., on the 31st March and was 28.714 inches, which is .094 of an inch *higher* than the *lowest reading* of 1859, which gives a yearly range of 1.935 inches. September shows the lowest range for the year (or the least fluctuation in the pressure of the Atmosphere). February, March, and December indicate the greatest amount of Atmospheric disturbance. The *mean* reading of the Barometer for the year was 20.985 inches, which is .038 of an inch less than the mean of last year. The mean of the year 1860 and also the absolute range exceed by a small amount the mean atmospheric pressure compared with a series of years. The monthly mean heights of the Barometer are as follows:—

	Inches.		Inches.		Inches.
January,	29.861	May,	29.864	September,	29.885
February,	.813	June,	.682	October,	·919
March,	·562	July,	·733	November,	·720
April,	.669	August,	.760	December,	.918

The monthly range for the year was also as follows:—

	Inches.		Inches.		Inches.
January,	1.141	May,	.959	September,	·450
February,	1.442	June,	.883	October,	1.141
March,	1.445	July,	.684	November,	1.255
April,	1.154	August,	.611	December,	1.476

The greatest range within twenty-four hours with a rising column took place on the 14th February, and rose from 10 p.m. of the 14th day to 6 a.m. of the 15th day, from 29.142 inches to 30.252 inches, equal to 1.110 inches of difference, and the greatest range with a falling column occurred on the 3rd of March, and fell from 30.102 inches at 6 a.m. to 29.087 inches at 10 p.m., showing a depression of 1.015 inches. A somewhat sudden depression occurred before the storm of the 24th of November, when the Barometer at 6 a.m. stood at 29.907 inches and fell to 29.135 at 2 p.m., equal to a difference of 0.772 of an inch in 8 hours. Another sudden rise also occurred on the 13th of December at 10 p.m.: the mercurial column stood at 29.889 inches, and at 10 p.m. on the 16th day it stood at 30.233 inches, showing a rise of 0.314 of an inch within 24 hours.

Temperature of the Atmosphere.—The mean temperature of the year 1860, was 43°41 which shows an increase of 7.32 degrees above the mean temperature of 1859, and an increase of 1°85 degrees over the average mean temperature of a series of years. January, November, and December, were warmer than the same months of the year 1859, so were also April, May, June, August, and September. July was colder by 0.89 of a degree than July, 1859, and is the coldest July on record here. August was the warmest month this year, and so it was in 1859; but July for a series of years has been the warmest month, and shows an average temperature of 7°20 degrees above the mean of July, 1860. The depression in the mean temperature was owing in a great measure to the cold terms of January and December, and to the heavy rains of July.

The following shows the mean temperature of the months:

January,.....13°15	May,.....59°85	September, ...56°40
February,.....15°70	June,.....68°15	October, ...45°48
March,.....30°52	July, ...66°47	November, ...37°59
April, ...40°29	August,.....69°29	December,.....18°18

The cold term of January, 1860, reached a minimum of 25°4 below zero, and the cold term of February a minimum of 25° below zero; the cold term of December indicated only 15° below zero; and the highest reading of the thermometer occurred on the 10th August, and marked 92°2 degrees, and the lowest reading was on the 3rd of January, and indicated 25°4 below zero. The great absolute range or climatic difference being 117.6 degrees, showing a difference of 25°2 degrees between the extreme range of 1859 and 1860. The following table shows the amount of range or climatic difference for each month of 1860:

January, ...71°8	May,.....61°0	September,.....58°5
February.....74°5	June,.....46°2	October,.....44°0
March, ...52°8	July,.....45°3	November,.....59°4
April,.....66°7	August, ...52°9	December, ...47°4

The mean temperature of the Winter Quarter was 12°59, of the Spring Quarter, 45°55, of the Summer Quarter, 67°63, and of the Autumn Quarter, 46°49. June and July were exempt from frost, but frost occurred on the 11th of August. A thermometer sunk 18 inches in the ground, indicated in April a temperature of 42°0; in May, 57°6; in June, 66°1; in July, 65°2; in August, 67°0; in September, 61°; in October, 50°4; in November, 43°0. A

very sudden decrease of temperature occurred on the 19th May; it rained most of the day, with a temperature of 65° degrees at 2 p. m., and at 10 p. m., a temperature of 53° degrees, with a S. E. wind, which veered by the S. W. to W. with snow, the thermometer standing at 6, a. m., at 32°1. The leaves of the lilac and dog-rose were frozen; the amount of snow which fell was 0.70 of an inch, and was the last snow of the Spring of 1860.

Humidity of the atmosphere.—The mean relative amount of Humidity for the year was ·780, saturation being equal to 1,000, shewing a difference of ·012 more of Humidity than the mean of 1859. Complete saturation occurred twice during the year. The relative Humidity for the different months of 1860 was as follows:

January	0·786	May	0·695	September	0·777
February	·751	June	·715	October	·839
March	·813	July	·679	November	·839
April	·753	August	·740	December	·786

July, as usual, was the driest month of the year, and this is borne out by comparison with the mean Humidity of a series of years.

Rain.—Fell on 93 days, amounting to 48·132 inches. It was raining 419 hours, and was accompanied by thunder and lightning on 9 days, which shows a decrease of 1·609 inches, compared with the amount which fell in 1859, but an increase of 5·128 inches over the mean average of a series of years. The following table shows the monthly Fall of Rain in inches on the surface:

	Inches.		Inches.		Inches.
January	0·474	May	4·514	September	11·286
February	0·616	June	2·849	October	4·787
March	0·378	July	5·732	November	5·898
April	1·733	August	9·361	December	0·714

There were fewer storms of Thunder by 11 observed here compared with 1859. There were 62 cloudless days, giving 6 more compared with 1859, and 133 nights suitable for Astronomical purposes, which exceeds somewhat the average. A great storm of rain occurred on the 24th of August, and from 7h. 30m. A. M., to 8h. 30m. A.M., (1 hour), there fell 1·706 inch.

Snow.—Fell on 55 days, amounting to 61.27 inches; it was snowing 285 hours 45 minutes, showing a decrease in the amount of snow of 33.38 inches compared with 1859, and a decrease of 34.49 inches compared with the mean average of a series of years.

The first snow of the season 1859–60, fell on the 20th October; the last fell on the 20th May, 1860. The first snow of the season 1860 fell on the 29th September.

Evaporation.—The amount of evaporation from the surface of water, during the six months for which observations are recorded, amounted to 17.71 inches, which exceeds by 2.42 inches the amount of the year 1859, and bears a remarkable co-incidence with the relative Humidity of the atmosphere.

Wind.—The most prevalent wind was the W., and the least prevalent the S. the total amount of horizontal movement in miles, was 44213.52 miles which is less by 15011.08 miles than the amount of 1859. The mean velocity was 5.04 miles per hour, which gives 1.15 miles less in velocity, compared with 1859. The following table show the monthly amount in miles:

	Miles.		Miles.		Miles.
January	4699·50	May	3156·62	September	3988·14
February	4237·30	June	2905·36	October	4955·57
March	4376·10	July	3237·98	November	5826.76
April	4150·72	August	3024·21	December	3642.26

October was the most windy month and June was the calmest. The greatest velocity observed during the year was 28.10 miles per hour.

The greatest Intensity of the Sun's Rays was 110° 6 degrees; and *the lowest point of Terrestrial Radiation*—27° 4 below zero.

Clouds.—There were 62 Cloudless days. The most prevailing clouds were the *Cumulo Stratus.*

Dew.—The amount of Dew was somewhat below the usual average amount.

The Aurora Borealis was visible at observation hour on 43 nights. A bright display occurred on the 19th July.

The Zodiacal Light was bright in the early part of the year, but Venus prevented a distinct view at an early hour of the evening.

Lunar Haloes were seen on 5 nights.

Parhelia and Solar Haloes seen on 7 days.

A very distinct and well defined *Lunar Rainbow* was visible at 11 P. M. on the 25th day of August.

Observations on the *Solar Spots* have formed a part of the records during the year.

Ozone.—The results of the past year have been obtained by means of an ozoneometer of fine calico steeped in the Starch and Iodine solution, which has been proved in many respects preferable to paper, which may be attributed to the more absorbent powers of the cotton fibre. Observations have also been continued by keeping a strip of the prepared calico constantly moving by clock-work over a slit of 1 inch in length, shewing the hourly amount of Ozone, which has furnished very interesting results, compared with the *maximum* and *minimum* variations in the humidity and pressure of the atmosphere. The effects of the coloured rays of light upon the amount have also been continued, as also the effects of vegetation on its development.

Atmospheric Electricity.—The tri-daily observations were still continued by the large apparatus until the 24th November when it was blown down during the gale of that day. Since then Romerhausen's apparatus has supplied its place, but the observations are by far too extended for a short notice.

The Comet of June was observed on several nights.

The transits of Venus and Jupiter by the Moon were visible in April.

The Eclipse of the Sun of the 17th July took place under very favorable circumstances and furnished several interesting phenomena.

Two smart and distinct shocks of an Earthquake were felt here at 5·55 A. M. on the morning of the 17th October, the wave passing from the East to Westward. The sound wave was distinct from the earth wave, and was felt generally in Eastern Canada.

Crows, (*corvus corona*) first seen, 1st March. The Song Sparrow, (*Fringilla Melodia*) 1st heard, 10th March. Wild geese (*Anser Canadensis*) 1st seen flying west, 27th March. Swallows, (*Hirundo rufa*) 1st seen, 24th April.

Frogs, (*Rana fontenalis*) 1st heard, 20th April. Shad (*Alosa præstabilis*) 1st caught, 10th May. Fire-flies, (*Lampyris corusca*) 1st seen, 24th May. Snow Birds (*Plectrophanes nivalis*) 1st seen, 3rd November. Crows did not winter here.

Lilac in full leaf, 9th May. *Plum Tree* in flower, 9th May. *Dandelion* in flower, 12th May. *Currant* in leaf, 9th May. *Gooseberry* in leaf, 9th May. *Wild Strawberry* ripe, 12th June.

OBSERVATORY, ISLE JESUS, *7th January*, 1861.

REVIEW DEPARTMENT.

ART. IV.—*A Practical Treatise on the Ætiology, Pathology, and treatment of the congenital malformations of the Rectum and Anus.* By WILLIAM BODENHAMER, M.D. Illustrated by XVI plates and exemplified by CCLXXXVII cases. New York: Samuel S. & W. Wood. Montreal: G. Dawson & Son, 1860. 8vo. pp. 368.

The author of this volume has done an essential service to the obstetrician, surgeon and physician, in laying before them, and condensing in monographic form, one of the least understood, most curious, and interesting classes of malformations, the object and scope of the work being to prove that the unfortunate subjects of them should by no means be left to die unaided, but that although that result is too common even after the best performed operative procedures for their relief, yet that it should be by no means neglected, success having frequently followed where there appeared to exist not the slightest hopes of it.

We remark that the author has done a good service, because, with few exceptions, little has been achieved in this almost neglected department of Obstetrico-surgical science. It is true that the list of writers who have detailed cases of these malformations is comparatively large, those who have endeavoured to generalize the facts garnered exceedingly few. Papindorf who wrote in 1783 "A Treatise on Congenital Malformations of the Anus," attempted a system of classification of those abnormalities, yet imperfect, though it is, it for many years served its object. Observations on the subject will be met with in various surgical works, but the object of the writers has rather been to investigate the best means of establishing or forming an artificial anus, than the peculiarities of those singular deviations which had dictated imperiously that necessity. Hence we regard the work before us a peculiarly valuable and interesting one. While the author has laboured with the greatest industry in collecting and giving all the known and recorded cases of these congenital deviations from normal structure, he has done more, he has generalized all that is known upon the matter, and has produced a volume worthy of occupying a distinguished position in the library of every physician.

The volume contains the history of 387 cases of these interesting malforma-

tions, and without entering into the theories advanced to explain their probable origin, a careful analysis has enabled the author to classify them under nine different species, an arrangement nearly but not quite the same as that adopted by Papindorf, and they are thus enumerated:—

"*First Species.*—This species consists of a preternatural narrowing of the anus at its margin, and occasionally extending a short distance above this point.

"*Second Species.*—In this species there is a complete occlusion of the anal aperture by a simple membrane; or by the common integument, or a substance analogous to it, more or less thick and hard.

"*Third Species.*—In this species there is no anus whatever, the rectum being partially deficient and terminating in a cul-de-sac at a greater or less distance above its natural outlet, without any communication whatever, either externally or internally.

"*Fourth Species.*—The anus in this species is normal, but the rectum at variable distances above it, is either deficient, obliterated, or completely obstructed by a membranous septum.

"*Fifth Species.*—In this species the rectum terminates externally by an abnormal anus, located in some unnatural situation, as at some point in the sacral region; or the rectum is prolonged in the form of a fistulous sinus and terminates by an abnormal anus, at the glans penis, the labia pudendi, or at different points in the perinæum. The natural anus being generally absent, its functions are performed by the abnormal one.

"*Sixth Species.*—The rectum in this species opens preternaturally into the bladder, the urethra, or the vagina; or into a cloaca in the perinæum with the urethra and the vagina. In these instances the normal anus does not generally exist.

"*Seventh Species.*—In this species the rectum is normal, with the exception that either the ureters, the vagina or the uterus, open preternaturally into it.

"*Eighth Species.*—In this species the rectum is entirely wanting.

"*Ninth Species.*—In this species the rectum and the colon are both absent, and there is usually an abnormal anus situated in some extraordinary part of the body."

It is scarcely necessary for us to detail the general symptoms which an occlusion of the lower abdominal passage would elicit. They are such as in general terms would simulate strangulated Hernia; but the existence of such a condition should be suspected if no alvine discharge should take place from a newly born infant within the first twenty-four hours from its birth. This should necessitate in all circumstances a close examination of the anal region by the obstetrician. If nothing is done to relieve the little sufferer, and malformation of a serious character exists, death occurs between the third and eighth day according to its inherent vigour. The author narrates some singular instances of retention of life under these unfavorable conditions. In one case no unfavourable symptoms declared themselves until the evening of the twelfth day, at which time the deformity was for the first time recognized. In another case a child lived three months, without having passed anything from its bowels. In another case in which the rectum was discovered after death entirely absent, the infant lived seven weeks and three days. A fourth case is narrated in which life was prolonged to six months, the infant having never had an evacuation from its bowels; and a fifth, under like circumstances lived one hundred and two days. These cases are however exceptions to the rule, death most commonly supvreening within the time specified, from enteritis peritonitis or intestinal paralysis.

With regard to the prognosis we permit the author to speak for himself as we feel that we can can scarcely condense his observations with propriety.

"Anciently the malformations of the anus and the rectum, together with those of the genito-urinary organs, were looked upon as necessarily fatal, and the unfortunate victims of them were regarded in the light of monsters, and left to perish. Even at the present day this sentiment prevails to a certain extent, and the subject is still surrounded by no inconsiderable degree of mystery, the most insignificent deviations from the natural standard being apt to be exaggerated and invested with an importance which by no means legitimately belongs to them.

"When we take into consideration the fragility of the subjects, the deplorable nature of some of the species of these malformations, and the formidable character of some of the operations necessary for their relief, the hope of ultimate success does indeed appear but slight; yet such are the great improvements that have been, and are being made in modern surgery, that the evil is by no means deplorable, even in some of the worst cases, as will be shown hereafter. No case should be abandoned in despair, although surrounded by the most discouraging circumstances. Many of the cases may be relieved immediately by simple and appropriate treatment, and others admit of certain relief, by prompt surgical measures, which not only save, but prolong life. The surgeon must be very careful, however, not to promise the parents or the friends of the child too much even in the most simple cases, recollecting how natural it is for them to imagine that if the operation succeeds, all will be well, and that the child will be left in every respect perfect. This would be a great mistake, as every surgeon knows who has had any experience in endeavouring to remedy defective formations. Therefore, to prevent misconception on this point, and the evil consequences of it, the surgeon must previously explain to them that the operation may afford an outlet and immediate relief; but that such an artificial opening or anus, not being formed by nature for the specific purpose, cannot be expected to possess all the powers or to perform all the functions of which the natural anus would have been capable.

"The most favourable cases of course are those which require the least surgical assistance—such in which there is a contraction of the anal orifice, and require but simple dilatation, or such in which the anal orifice is obstructed by a membrane which only requires to be divided.

"The most formidable cases are those in which there is a considerable deficiency, or an entire absence of the rectum, and in which there exists no outlet whatever. In all such cases, without an operation, death soon takes place from necessity. Some surgeons, however, consider all such cases necessarily fatal, and beyond the power of art to remedy; yet, as I will hereafter show, even a number of such cases have been relieved, by either the operation of *proctoplasty* or *colotomy*. In such a case even a doubtful remedy should be preferred and attempted in preference to the certain death of the infant.

"Those cases in which the rectum opens into the bladder by an abnormal anus, or into the urethra, or the vagina; or in which there exists a preternatural anus on some part of the body, are not so formidable and do not terminate in death so quickly. Some of them may be entirely relieved, others greatly benefited, whilst others again admit of palliative treatment only."

With regard to the treatment, we have to observe that with the exception of the first class of cases, those of congenital stricture, an operation of greater or less magnitude, for the purpose of establishing an artificial anus, either in the perineum, or in some portion of the abdominal wall, is imperiously demanded. But let us now examine the different species of these malformations.

1. The first species may consist of a congenital stricture of the anal orifice itself, the most simple; or the stricture may exist at various high positions within the rectum, and be produced by an abnormal narrowing of the canal, or by a prolongation of numerous mucous folds producing an obstruction, while some-

times the marginal integument of the anus may extend over the border of the sphincter, and thus be productive of deformity and contraction. Attention is generally drawn to this peculiar deformity, by the severe straining efforts which the infant makes, the difficulty which it experiences at each evacuation, and the extremely small aperture. But few cases of this description are on record, and hence this variety has been supposed to be rare, The author doubts this, however, and thinks it to be more common than is generally supposed, because they are so easily remedied, and commonly by the nurse.

The treatment consists in the employment of bougies, gradually increasing in size, of which he prefers those made of wax. They should be used at least once in the twenty-four hours: the stricture passed and the instrument then immediately withdrawn. He objects to the prolonged retention of it in the gut, and he furthermore advises an enema of warm flax seed tea an hour previous to the introduction. The author protests in the strongest terms against incisions, except in extremely urgent cases, because says he "it is an indubitable fact that the smallest contraction may sooner or later be overcome by judicious dilatation." Where, however, the stricture is the result of a rigid and powerful contraction of the sphincters, and no time is left to perform dilatation on account of the urgency of the symptoms, or when it is due to an extension of the marginal integument of the anus, then incisions should be practised to the extent required, to be followed by the system of dilatation previously noticed.

The author narrates twelve cases of this first variety as occurring in the practice of various authors.

2. The second species constitutes the *atresia orificii ani* of authors, is the next most simple form, and exceedingly common. In this variety the anus is simply closed by a membrane of greater or less density, much as the hymen closes the vaginal canal, though without perforation. The symptoms of this variety are unmistakably clear, and its treatment by incision manifest. The author gives fourteen cases of this variety.

3. The third species constitutes the *atresia ani et intestini recti* of authors. In these cases there is not only no visible anus, but the rectum itself, instead of descending to its external aperture, terminates in a cul de sac at some variable point above it, either hanging loose in the pelvic cavity, or adhering to the rectum, bladder or some contiguous part. This is a bad form of malformation, and is a serious and embarrassing case to the surgeon, as there are no external signs which can guide him to the position of the rectum, the termination of which may be even out of the natural line of its descent.

For the purpose of diagnosing this variety, the index finger of the right hand should be placed in the normal position of the anus, and pushed firmly up towards the pelvic cavity, in the direction of the rectum, while at the same time, the left hand should make firm pressure on the abdomen, pressing it downwards towards the other finger. In this manner the approach of the rectum towards the index finger may be detected if near. Sometimes the finger alone pressing the perineum may detect the lower distended extremity of the gut.

An incision of proper depth should now be made in the direction of the

intestine. A finger, introduced into the wound, will now with the aid of the pressure already indicated, detect the enlarged end of the intestine.

Auscultation and percussion may be used in these cases to detect the presence and situation of the distended intestine, and the introduction of a catheter or sound into the bladder will also serve in some of these obscure cases to facilitate our knowledge.

In these cases Mr. Hutchinson advises titillation in the perineum over the natural situation of the anus, which induces the child to strain and thus force the intestine down.

The results of operative procedure in these cases have been found highly favourable, and it presents the only chance of saving the child.

The operation, named *Proctoplasty*, is performed by making an incision into the perineum towards the end of the rectum dissecting carefully through the tissus which separate it from the surface; breaking up its adhesions, if any; seizing its extremity by the forceps, bringing it down, opening it, emptying its contents, and uniting its cut edges to those of the perineal wound in the natural situation of the anus, according to the method advised by Amussat. If it is found impossible to bring it down, it must be opened where it is by a crucial incision, and the passage between the newly made anus and the rectum kept open by the ordinary methods.

The author here enters into full detail of all the arguments for and against the operation, and finally details the operation itself, as suggested and performed by Amussat, with great clearness. This is one of the most instructive parts of the work.

The author details thirty-five examples of this variety.

4. The fourth variety, is when the anus is normal, but the termination of the rectum at a variable distance above it, the intestine sometimes intercepted by membranous septa from the anal aperture.

The treatment in these cases consists in an exploratory incision or puncture through the anal aperture in the direction in which, by the previous introduction of the finger, the rectum is ascertained to be. Success in these cases is highly probable.

Thirty-seven cases of this variety are recorded.

5. The treatment of the fifth class of cases, in the male child, consists in the complete isolation of the accidental canal from the end of the rectum, and the establishment of an artificial anus in the pernineum in its normal site. The accidental canal is to be treated as a fistula, by inserting into it a fine silk ligature, and thus gradually destroying its walls, or by incising it with a small narrow sharp pointed bistoury guided by a flexible director. Dieffenbach, Friedberg and Vicq. D'Azyr have each proposed peculiar operations for the relief of these deformities, each of which is given in detail.

One hundred and twenty-five cases of this abnormality are given.

6. In the sixth variety, the principle of treatment is still to form an artificial anus in the perineum, if the end of the rectum can be found, in accordance with the method advised in the second variety. If this is successful, it will give relief to present symptoms, and afford time for further thought as to after

measures. Amussat, Martin of Lyons, Vicq. D'Azyes, Velpeau, Barton of Philadelphia, and Dieffenbach have all proposed peculiar operations for the relief of this variety; but we apprehend that no especial plan of operation can be laid down. The operative procedure must vary in accordance with the exigency of the case.

These cases are not usually fatal, patients having not unfrequently attained mature ages laboring under this deformity.

Twenty-five cases are narrated in which the rectum opened into the bladder, twenty-four in which it terminated in the urethra, twenty-nine in which it terminated in the vagina, and one in which the rectum with the urethra and vagina terminated in a cloaca in the perineum.

7. This variety, in the present state of surgical science is irremediable. It is not necessarily fatal, many cases having attained mature years, but they are deplorably miserable for life. What is strange however, is the fact, that women with such imperfection have been known to marry, and their parturition has been effected through the perineum, though with more or less laceration. "Barbout says that he delivered two women per rectum. Professor Rossi mentions a similar case," and Vallesnieri mentions that *coitus per anum* under such circumstances might be undoubtedly followed by conception. A curious circumstance is detailed in this connection. Mr. Lewis made this question the subject of a thesis in 1753, and "it was delivered to the schools of surgery over which he presided, and caused him to be prosecuted by the Parliament of Paris; while the Doctors of the Sarbonne interdicted him for addressing to the casuists the following question: "*In uxore sic disposita, uti fas sit; vel non? Judicent theologii morales?*" The Pope, however, being much more philosophic than the Parliament or the Sarbonne, gave M. Lewis absolution."

Seven cases are given in which the ureters terminated in the rectum, and nine cases in which the uterus terminated in the same viscus.

In the eighth and ninth varieties the only available treatment is the formation of an abdominal anus. The author details twenty-eight cases of the former variety and six cases of the latter.

The last chapter, with its subdivisions, is occupied with the consideration of the operation for artificial abdominal anus, and is without exception the most valuable chapter in the work. The operations for this purpose of Littré and Callisen together with their modifications, that of the former by Pillore, that of the latter by Amussat, are described at length, carefully and judiciously examined, and each supported by cases. A short notice is also taken of Martin's operation. Into the nature or peculiarities of these operations we cannot enter, as we have more than occupied our available space. Sensible that the volume is one, which will establish a high position in the annals of medical literature for the author, we have endeavoured to give as faithful a resumée of its contents as our columns permitted. Further information must be sought in the work itself, to which we beg to refer our readers.

The volume appears with all that punctilious regard to appearance which characterizes the publications of S. S. and W. Wood of New York. It is illustrated by sixteen tinted lithographs executed in the highest style of the art, and

is altogether a work which reflects the highest credit upon the author and the publisher.

ART. V.—*The Pocket Anatomist being a complete description of the Anatomy of the Human body for the use of students.* By M. W. Hilles, formerly lecturer on Anatomy and Physiology, at the Westminster Hospital School of Medicine, Philadelphia, Lindsay and Blakiston; Montreal, B. Dawson & Son, 1860, 18mo. p. 263.

The author observes with the most perfect truthfulness in the preface to this little work, that there is no royal road to learning. The student who desires an intimate acquaintance with anatomy must seek his knowledge in the dissecting room; but the knowledge once acquired, this little volume will be found to prove a valuable aid to his memory.

We have examined the Pocket Anatomist with care, and far from finding it a superficial treatise, we are on the contrary surprised at the general minuteness with which the anatomical descriptions are given. It is in truth a valuable compendium for the student, one however not destined to supplement the more elaborate treatises, but one which, will be found extremely useful, when an acquaintance with minute anatomy has been once obtained. We therefore have little hesitation in recommending it to the student, as a work of greater pretensions than its name indicates.

ART. VI.—*An Epitome of Surgery.* By G. Bradwell Gill, M.D., late House Surgeon at the London Hospital. New-York; Balliere and Brothers. Montreal: Dawson and Son. 1860, 18 mo. p. 94.

This little Epitome of Surgery consists of a short account of the diseases recognized as Surgical, and is simply confined to a sketch of their principal symptoms, and treatment, given in as few words as possible.

Its object is to assist the memory of the student, but we apprehend that the subjects are much too sparingly treated to be of material benefit. We must confess that we have no great confidence in these methods of acquiring knowledge, or of refreshing memory; and if the student has to depend upon such works to enable him to pass his examinations, we much fear that he will find himself wanting. However, those who are well grounded in professional principles may find the work before us of service, but to all others, it is more likely to be productive of an infinity of harm than good, by weaning them from the study of those more classical productions which every student should thoroughly master.

ART. VII.—*Report of the Superintendent of Education for Lower Canada for the year* 1859.

This important document has been lying on our table for some time, and we would assure its respected author that circumstances, not neglect, have prevented an earlier notice of its valuable contents. Education in Lower Canada has ceased to be a question of serious difficulty to the Government, or to those more immediately charged with its conduct. A system of elementary instruction very generally obtains throughout the agricultural districts, and we no more hear of

organised. or even casual, resistance to the laws enacted to promote this national good. This happy state of things has enabled the Government to enlarge the means of education, and indeed to place the whole system upon such a footing as must compare favorably with that of any other in the British Empire. Thus, we read in the report before us of a Council of Public Instruction, which held its first meeting on the 10th January of the last year and in which the different religious bodies, as well as the respective nationalities, were most respectably represented; of Normal, Model, Industrial, and even Infant Schools; of a valuable Museum attached to one of the Model schools; of conferences of teachers in which "important questions have been discussed and excellent lectures delivered"; of parish libraries, to the number of one hundred and thirty one; of School Inspectors, numbering as many as twenty-six, and such other arrangements as appertain to an advanced state of public instruction. We see it stated that "six of the pupils who have left the McGill Normal school are now teachers in Upper Canada, and two from the Jacques Cartier school are teachers in Prince Edwards' Island." Respecting the attendance at the Normal schools the report says, "it is pleasant to observe that nearly all the pupils are from the country; and that nearly all the counties in Lower Canada have furnished their contingent." This is indeed a pleasing fact, and must tend to excellent results, inasmuch as these pupils, when they will have become qualified teachers, will, in most instances, return to their native counties, and be received with a degree of confidence and respect commensurate with their acquirements. Tables of statistics appended to the report shew the present number of primary schools to be 3,011, an increase over the year 1858 of 147; the number of scholars 141,533, increase over previous year, 10,593. The statistics of superior education shew as the number of pupils of Universities and Superior Schools, 509; of Classical Colleges, 2,756; of Industrial Colleges, 1,962; Academies for boys, 6.568; for girls, 14,278; Normal Schools, 219; total, 26,287, increase over the year 1858, 412.

Highly pleasing as is this report in its general bearing, it still has its dark side. "Wherever there is light there is shade." The concluding words give us the painful fact, "that notwithstauding the great number of schools of all kinds now possessed by the two great cities of Quebec and Montreal a large proportion of the children in both attend no school, and receive no kind of instruction. All the schools now in operation are literally overcrowded, but neither the number nor the dimensions correspond with the wants of the still increasing population." In connection with this statement Mr. Chauveau avers, that while "for some years past Quebec has voted an additional sum, Montreal has hitherto refused this boon." This state of things should no longer be disregarded by our Statesmen and Philantrophists. Ignorance in Cities is much more fatal than in the rural parts; and if it be the question of economy, which is interfering between our city poor and their right to protection from the heathen darkness, which we read of as abounding in some of the old-world cities, surely very little reflection would shew that it is cheaper, besides being incomparably more pleasant, to pay the school master than the policeman; and that a better return can be obtained for money given to Clergymen for teaching in public schools, than for the salaries paid them as Chaplains of Gaols, or as associates of the Sheriff on the demoralising public scaffold.

PERISCOPIC DEPARTMENT.

ANATOMY.

ON THE ARRANGEMENT OF THE MUSCULAR FIBRES OF THE VENTRICULAR PORTION OF THE HEART OF THE MAMMAL.

By James Pettigrew, Esq.

In the following abstract, published in the Proceedings of the Royal Society, of the Croonian Lecture for 1859, Mr. Pettigrew has given a sketch of his original and important views on the muscular structure of the heart, based upon an extensive series of elaborate dissections which he performed at the University of Edinburgh, in competition for a prize offered by Professor Goodsir. They form a contribution of great value to the anatomy and physiology of the subject:—

The Lecturer began by referring to the descriptions of the arrangement of the ventricular fibres of the heart given by previous enquirers, more especially Lower, Senac, Wolff, Gerdy, Duncan and Reid. He then proceeded to give an account of the results of his own investigations, which had been conducted on the hearts of the sheep, calf, deer, ox, horse, etc.; all of which, he observed, bear a perfect resemblance to the human heart. In order as much as possible, to overcome the difficulties of the subject, he availed himself of drawings, explanatory diagrams, and models illustrating the course and relation of the fibres. To these last, however, he observed, he attached no special importance, further than that they were useful vehicles of communication; and it was to the dissections themselves, some of which were before the Society, that he looked for a corroboration of the statements he advanced.

Commencing with the left ventricle, which he believes to be the typical one, the Lecturer stated that, by exercising a little care, he had been enabled to unwind as it were, its muscular substance, and so to separate its walls into several layers, each of which is characterised by a difference in direction. Seven layers at least, can be readily shown by dissection; but he believes they are in reality nine, viz., four external, the fifth or central, and four internal. He explained how the external fibres are continuous with the internal fibres at the apex, as was known to Lower, Gerdy, and others; and how the fibres constituting the several external layers are continuous with corresponding internal layers likewise at the base,—a fact to which the lecturer drew particular attention, as being contrary to the generally received opinion, which is to the effect that the fibres at the base are non-continuous, and arise from the auriculo-ventricular tendinous rings, which, as he showed by numerous dissections, is not the case.

Coming next to the question of the direction of the fibres, he showed how there is a gradational sequence in the direction of the fibres constituting the several layers. Thus the fibres of the first layer are more vertical in direction than those of the second, the second than those of the third, the third than those of the fourth, and the fourth than those of the fifth, the fibres constituting which layers are transverse, and run at nearly right angles to those of the first layer. Passing the fifth layer, which occupies the centre of the ventricular wall and forms the boundary between the external and internal layers, the order of things is reversed; and the remaining layers, viz., six, seven, eight, and nine gradually return to the vertical in an opposite direction, and in an inverse order. This remarkable change in the direction of the external and internal fibres, which had in part been figured by Senac, and imperfectly described by Reid, as well as other detached and important facts ascertained by himself and others—such as the continuity of the fibres at the apex and base, already adverted to—he suggested might be accounted for by the law of the double conical spiral, which he proceeded forthwith to explain.

The expression of the law, as he conceives it, with reference to the arrangement of the fibres in the ventricle, is briefly the following:—By a simple process of involution and evolution, the external fibres become *internal* at the apex, and *external* again at the base; so that, whether the fibres be traced from without inwards, or from within outwards, they always return to points not wide apart from those from whence they started. In order to illustrate the principle of the double conical spiral in the above sense, he took a sheet of net, through which parallel threads of coloured wool, representing the individual fibres, were drawn at intervals; and laying it out on the table before him, with the threads placed horizontally, seized it by the right-hand off corner and rolled it in upon itself (*i. e.*, towards his own body) seven turns, so as to produce a cone whose walls consisted of nine layers. On gradually unwinding the walls of the cone thus fashioned (which is tantamount to undoing the spirals), so as to intimate the removal of consecutive layers from the walls of the ventricle, he finds that the gradation in the direction of the several layers just specified is distinctly marked; and that these layers, as was exhibited in various dissections, find a counterpart in the ventricle itself. Thus (the heart being supposed to be placed upright on its apex), in the first external layer the threads are seen running from base to apex, and from left to right, almost vertically; in the second layer they are slightly oblique; this obliquity increases in the third, and still more in the succeeding layer, till in the fifth, or central one, the direction of the threads becomes transverse. After passing the central layer, the direction of the threads (as of the fibres) is reversed: in the sixth layer they begin to turn from *right* to *left*, with a slight inclination *upwards;* and in succeeding layers gradually become more and more vertical, until the innermost, or ninth, is reached, in which they become as verticle as in the first, but are curved in an opposite direction.

As a necessary consequence of this arrangement of the fibres, the lecturer showed that when the layers are in apposition, as they exist in the undissected ventricle, the first external layer and the last internal cross each other with a slight deviation from the vertical, as in the letter X; while in the succeeding external and internal layers, until the fifth or central one, which is transverse, is reached, they cross at successively wider vertical angles, as may be represented by an ⋈ placed horizontally.

Holding the cone, prepared as described, against the light, the lecturer then showed how, by the rolling process, a double system of conical spirals, similar to those found in the left ventricle, had been produced.—the one an external left-handed down system, running from base to apex, and corresponding with the external layers; the other an internal right-handed up system, running from apex to base, and corresponding with the internal fibres; and how, seeing the opposite systems are the results of different portions of the same threads being rolled in different directions (the one within the other), the spirals are consequently continuous at the apex.

He in this manner explained the continuity of the external and internal fibres at the apex. By simply producing the threads forming the internal spirals, and turning them out at the base until they met corresponding external spirals, he next showed how the continuity of the fibres at the base might be accounted for. The connection of the fibres at the base, he remarked, is effected for the most part as at the apex, by continuity of thier proper muscular substance; but those of the papillary muscles are continued by the tendinous cords. This continuity observes a certain order, so that certain external layers are continued at the apex into certain internal layers, and turn outwards at the base into their original external position. Thus the first layer is continuous with the ninth, the second with the eighth, the third with the seventh, and the fourth with the sixth; while the fifth occupies, as already said, the middle place between the four external and four internal. He thus endeavoured to prove that a strong analogy exists between the arrangement of the fibres at the apex and the base; and that the same principle which turns in the external fibres at the apex also turns out the internal at the base,—a view which, while it extends rather than militates against that of older writers, was strongly supported by the arguments he adduced. It would therefore

seem that the fibres do not form simple loops pointing towards the apex as generally supposed, but twisted continuous loops pointing alike to apex and base. From this arrangement it follows that the first and ninth layers embrace in their convolutions those immediately beneath them, while these in turn embrace those next in succession, and so on until the central layer is reached,—an arrangement which may in part explain alike the rolling movements and powerful action of the ventricles.

The Lecturer next drew attention to the manner in which the external fibres pass into the interior of the ventricle to form the musculi papillaries. He first remarked that, when the external fibres get into the interior, they are necessarily confined to a smaller area, and are therefore crowded into a mass of greater thickness, which contributes to form the papillary muscles. He then showed that the external fibres, entering at the apex and forming the "vortex," pass inwards in two principal parcels or bundles, one of which comes chiefly from the posterior surface of the ventricle, and winds forwards to enter the apex anteriorly; whilst another comes from the anterior surface, and winds backwards to enter the apex posteriorly,—a fact which the lecturer believes has been hitherto overlooked. On entering the cavity, the anterior bundle crosses to the posterior wall, and forms the posterior papillary muscle, whilst the posterior bundle forms the anterior papillary muscle. The fact of this double entrance, and its relation to the papillary muscles, was shown in various preparations; and it was remarked that, but for this double entrance, which applies to all the external layers, the apex of the ventricle would be like the barrel of a pen cut slantingly, or, in fact lop-sided; whereas, by the arrangement described, it is rendered bilaterally symmetrical.

To bring this bilateral entrance and symmetry into harmony with the description already given of the succession of layers, and with the illustration of the conically rolled sheet, the lecturer explained that we must regard the primary sheet as having split into two; or we must suppose a second one superadded, and rolled up along with the first. In fact, if a second sheet of net with parallel threads be laid on the first, so that the threads upon it intersect those of the first at an acute angle, and the two are then rolled up together in the way already described, the result will be that the opening at the apex will have two symmetrical lips, as it were, representing the two parcels of fibres forming the vortex in the natural heart.

It is well known that the wall of the left ventricle is thickest at about a third of its length from the base, and that from this point it decreases in thickness towards the base and still more towards the apex, which is its thinnest part. This condition may be explained by a certain modification of the preceding description.—by supposing, namely (what is really the fact), that the outermost and innermost layers extend further towards the apex and towards the base than those which comes next, and these again further than those which succeed, and so on with the rest; the central one being of least extent, and confined indeed to about the middle third of the ventricle. In this way the ventricular wall is thickest towards its middle, where it is composed of all the layers; but becomes thinner and thinner towards the base and apex, where it consists of fewer and fewer layers.

Proceeding next to speak of the right ventricle, and especially of its relation to the left, the lecturer observed that the simplest way to view that ventricle is to regard it as a segment of the left one; and this view he considers to be most in accordance with what we know of its structure and mode of development. For a short time after the heart appears in the embryo, its ventricular compartment is simple; but a septum soon begins up within it, which proceeds from the right side of the apex and anterior wall of the cavity in the direction of the base, and is completed about the eighth week of intra-uterine life. For a time, moreover, the new-formed ventricles have equally thick walls, but as the full period is approached, the left, which is destined after birth to perform a larger amount of work, comes to predominate in thickness. Starting now from the left, or "typical" ventricle, constituted as above described, the lecturer showed that

by pushing in the anterior wall in imitation of the constructive process in the embryo until it reaches the posterior wall, two ventricles are produced, with a partition or septum between. As, however, the septum in this case is double, and unattached posteriorly, he said it was necessary, in order to complete the structure, to suppose the fibres forming the posterior border of the septal duplicature as coalescing or anastomosing with corresponding fibres of the posterior wall, whilst the fibres of the two halves of the duplicature itself are blended with each other. In this way, as he explained, there results a single septum connected posteriorly, and constituted in a manner which remarkably accords with the structure discovered by dissecting the adult heart. Thus, when both ventricles are dissected at the same time, the fibres forming the external layers posteriorly, are found to be for the most part common to both; in other words, the fibres on the back part of the left ventricle cross over the posterior coronary tract, and pass on to the right ventricle; whereas, in front, with the exception of a large cross band at the base, the fibres of the right and of the left ventricle respectively dip inward at the anterior coronary tract, as if altogether independent of each other,—an arrangement which induced Winslow to regard the heart as consisting of two muscles enveloped in a third. When, moreover, the so-called common fibres, posteriorly, are dissected layer by layer simultaneously with the independent anterior fibres, it is found that both pass through the same changes of direction; and the same rule holds good with the fibres of the septum.

Another possible mode of explaining the septum, as the lecturer showed, is to regard the layers entering into the formation of the left ventricle as splitting up posteriorly, the one half of each layer winding round to form the right ventricle, and then dipping in front to form the right half of the septum, whilst the other half proceeds immediately forwards to form the left half of the septum.

Both ventricles thus appear to be formed on the same general plan, but they differ materially in the structure of their apices; and the question arises, Which is the *primary* or *typical ventricle?* Now, while the fibres of the left ventricle enter the apex in a spiral manner by a species of involution similar to that which would be produced by rolling a sheet of muscle into a cone, those of the right ventricle simply bend or double on themselves. Moreover, as the lecturer suggested, were we to split the septum into two, assigning to each ventricle its proper share, and then apply the cut ends of the common fibres (which cross from the left to the right ventricle posteriorly) to their corresponding fibres in the left half of the septum, we should find that we had still a perfect whole—in other words a complete system of external and internal spirals; whereas the fibres of the right ventricle and its half of the septum, treated in the same way, would represent only a part of a more complete system—a portion nipped off, as it were, from the side of the perfect cone. Accordingly, if we would dissect the left ventricle, and especially its apex, symmetrically, we must detach the right ventricle as if it were of no account, and dissect layer after layer of the septum *pari passu* with the layers of the left ventricular wall generally; on the other hand, the right ventricle can be dissected only in connection with the left.

For these reasons the lecturer is inclined to regard the left ventricle as the typical one, and the right as a mere segment thereof; and, in further corroboration of this opinion, he referred to the shape of the right and left ventricular cavities, as shown by casts of their interior. The left always yields a beautifully finished and perfect right-handed conical screw; while the cast of the right ventricle, although it has the same twist, represents only an incomplete portion. This statement was illustrated by a wax-cast of the ventricles of the heart of a deer.

In conclusion, the lecturer remarked that the arrangement of the fibres composing the ventricles of the mammalian heart, as he had endeavoured to expose it, is characterized by comparative simplicity, and harmonizes perfectly with what is known of the heart's movements.

The matters touched on by the lecturer are more fully treated of, and the descriptions

copiously illustrated by figures, in his paper to the Royal Society, entitled "On the Arrangement of the Muscular Fibres of the Ventricular Portion of the Vertebrate Heart." By JAMES PETTIGREW, Esq. Communicated by John Goodsir, Esq., Professor of Anatomy in the University of Edinburgh.—*Edinburgh Medical Journal.*

SURGERY.

PROCEEDINGS OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TREPHINING IN SYPHILITIC DISEASE OF THE BONES OF THE SKULL.

By Mr. HENRY LEE.

Surgeon, to King's College Hospital and the Lock Hospital.

The author gives the particulars of three cases, in all of which the bones of the skull were very extensively diseased. In the first the outer and middle table of the frontal bone, principally on the left side, and part of the left parietal bone, had become necrosed, but the internal table retained its vitality when the trephine was applied. The inner surface of the portion of bone which was removed, presented a very uneven surface, from whence numerous small, irregular spicula of bone projected. The dura mater, which had been in contact with these, was altered in structure, and did not bleed, as the dura mater usually does when a portion of bone is removed by the trephine. There was here general debility, loss of sensation on the right side of the face, and deafness in both ears. There had also been extensive and long-continued ulceration on the left side of the neck. The removal of the portion of bone was followed by general restoration of health, recovery of the sensation of the face (with the exception of a small portion of the right side of the upper lip, which still remains numb), and perfect hearing. The patient had no other treatment except a pint of the decoction of sarsaparilla daily.

In the second case there was extensive disease, of the outer and middle tables of the skull. The patient became in consequence, subject to a peculiar kind of fit. This commenced with flushing of the face, followed by twitching of the muscles of that part. The fit would then sometimes terminate; at others, however, it would be followed by rigidity of the muscles of mastication and of the other muscles of the body: some of these fits lasted as much as six hours, during which the patient retained his consciousness. This patient was effected with an ulceration, which lasted over a period of eight and nine years, and which had extended over the whole right arm, from the shoulder to the wrist. The application of the trephine in this case was made over the right temporal bone; the portion of the internal table removed was slightly roughened, but not so much as in the preceding case. The fits recurred a few hours after the application of the trephine but ultimately ceased. The ulceration of the right arm which had existed between eight and nine years, healed, and the patient was restored to a comparative state of health.

In the third case the bones of the skull had been extensively destroyed, but in one part the inner table, had perished, while the outer and middle table still maintained their vitality. Opposite this point, effusion of plastic matter had taken place, and the disease had spread by continuity of action to the brain, and produced red softening of that organ. There was no disease either in the brain or in its membranes in those situations where the entire thickness of the skull had been removed. In this instance again there had been long-continued and most troublesome ulcerations, principally on the right leg, and destruction, by ulceration, of the eye and nostril on one side. The trephine was here applied to the right parietal bone in the immediate neighbourhood of the portion of the internal table which had perished. The exact spot

was not hit upon; but as softening of the brain had already taken place, and the patient was, comatose, any operation in this particular instance was too late.

The author dwelt particularly upon the absence of disease in those parts where the entire thickness of the skull had been removed, and concluded from thence, that the early removal of the diseased internal table afforded the best chance of success in such cases. It was evident in the last case, that the continued contact of the diseased bone had produced the effusion—first between the bone and dura mater; then between the membrane and the brain; and that the brain had ultimately become diseased by continuity of action. Had this diseased bone been earlier removed these results would not have occurred. The object of trephining, in these cases was, then—1st. To remove the cause of irritation from the surface of the dura mater. 2nd. To allow the discharge of any matter there secreted. 3rd. To establish a healthy suppuration from one part of that membrane, whereby the irritation caused by the prolonged contact of diseased bone would be relieved.—*Lancet.*

HAIR IN THE BLADDER.

Agnes W——aged 50, was admitted into the Lancaster infirmary, September the 12th, 1860. She is married, and the mother of nine children, the youngest of whom is 8 years old. Has always been weakly but has not previously suffered from any severe disease. Seven years ago she began to complain of a smarting pain on passing her urine, which deposited a quantity of red gravel. After some months this passed off, but was succeeded by a gradual change in the clearness of her urine, which went on increasing until about eighteen months ago. There was always a thick deposit of pus after the urine had stood all night. At this time she began to complain of a new symptom—namely a bearing-down, aching pain whilst the bladder was filling, succeeded, after emptying that organ (which act was accompanied by severe smarting) by such a fearful attack of an "indescribably horrid" pricking pain in the urethra, that it generally left her in a state of syncope for ten minutes after. The pain was always relieved by hot fomentations to the parts. With this there was great irritability of the bladder, so that she was sometimes up seven or eight times to pass urine. She had at times suffered from a sudden stoppage of her urine whilst in the act of passing it, lasting for ten minutes or so at a time. Since the attacks of pain first appeared, there have been some slight intermissions for periods of a few weeks. Last Christmas, after a longer intermission than usual, she passed a mass of about the size and length of an index finger, which she describes as resembling in appearance cotton waste. She was then without pain for a fortnight, after which she passed another mass of the same size and shape. Each time that one of these masses came away, she had gone an unusually long time without emptying the bladder; then on attempting to do so, there was a stoppage for ten minutes relieved by a sudden exit of the urine, carrying the mass with it. She is naturally of a costive habit, sometimes going six or seven days without a motion, and she always noticed that the pain was worse, when she had been some days without her bowels being relieved. There has been no appearance of catamenia, for the last three or four months. On admission she is of middle height, light hair and complexion. There is a marked red line around the gums, but she never suffers from cough. She is highly nervous. Body very well nourished. The day after admission the symptoms being so strongly indicative of stone, Mr. Hall proceeded to explore the bladder. He first introduced a female catheter, and at once detected what appeared to be a large rough calculus; but, on introducing an ordinary steel sound, there was not the slightest evidence of any foreign body in the viscus. Again when on the operating table, both Mr. Hall and his colleagues were equally unsuccessful with the sound; but on resorting to the female catheter, the small apertures at the side of the instrument immediately grated harshly against a calculus mass.

Having fully dilated the urethra Mr. Hall on introducing his finger, at once detected an oblong mass, about two inches in length, and the thickness of an index finger, covered over with sharp crystals yielding under slight pressure and apparently attached to the mucous membrane of the bladder. The forceps proved useless on account of the friability of the mass; but by means of a finger and scoop, Mr. Hall brought away piece by piece the whole of the concretion, the nature of which on examination fully explained the puzzle caused by its ready detection with the catheter, whilst it could not be felt by the sound. The mass consisted of a bundle of fine hairs about two inches in length, which growing from the posterior inferior part of the mucous membrane of the bladder, their free ends had lain in the pouch behind its neck. These, constantly macerating in the highly alkaline urine, and each hair affording a nucleus, the triple phosphate had most beautifully crystallized on them, presenting when slightly magnified the exact resemblance of syrup or sugar-candy. Some of the hairs were separate, others matted together; but in every case the radical third or half of the hair was free from crystals; and thus being able to yield to the slightest pressure the smooth side of the sound passed over the mass without giving any evidence of its presence; whereas the elasticity was was yet sufficient to enable the apertures of the catheter, in passing over it to give out a rasping or grating sensation. On examining the hairs microscopically, the bulbs were distinctly visible in about one-third of the number, although in no case is the little rootlet of the bulb present. The brittleness of the hair has evidently caused it in the other cases to break off without extracting the bulb, so that those left in will most probably give rise to a reccurence of the symptoms in due time. Since the operation the patient has done remarkably well she has had no return of the fearful attacks of pain, nor of the stoppage of urine, although there is still some smarting in the passage. There is, however, almost as much deposit from the urine, after standing all night, as before the operation.—*Lancet.*

PREMATURE EXTRACTION OF DECIDUOUS TEETH.

In the country physicians are often compelled by necessity to do duty as dentists. This fact must be our apology for an occasional reference to dental subjects, for it is important that whatever we, as physicians, have to do, we do well. In the *Dental Cosmos* for September, Dr. J. D. White has an article upon the premature extraction of the deciduous teeth. It is a general impression among the people that the tooth of a child should be extracted as soon as it is in the least degree loose. This opinion is too often seconded by the dentist or physician, to the injury of the regularity and beauty of the permanent set. But we will let Dr. White, who is the most competent, speak for himself. "The object of the present article is to protest against a practice which we hoped had died out, especially among those who have been appointed to teach the science of our art. We allude especially to the *premature extraction of the deciduous teeth, to give the permanent lateral incisors room.* We never knew a case where such operation was necessary, nor do we believe it ever exists. The absorption of the deciduous canine root has seldom commenced at the period of eruption of the permanent lateral incisors, the difference between their periods of eruption being from three to four years. When a deciduous tooth is extracted the part ceases to grow, with the disadvantage, we believe, also, of *atrophia* of the part, as a consequence. But, apart from the contraction which takes place, and causes the permanent laterals to approach the anterior deciduous molars, they fall backward in the arch, so that when they have grown long enough to meet the lower teeth, they are inside of them."—*American Medical Monthly.*

A NEW OPERATION FOR VARICOSE VEINS.

Dr. R. J. Levis, of the Philadelphia Hospital, has of late been treating, very successfully, varicose veins by an operation which, in a private letter to us, he says is *absolutely*

safe, and always successful. The operation consists in a *subcutaneous ligation of the varicose veins with silver or iron wire.* The hospital reports, as published in the *Medical and Surgical Reporter*, for several months past, give a history of this operation and its results. With a straight needle the wire is passed beneath the vein, out through the skin on the other side, and returned between the vein and the integument through the original place of entry, thus surrounding the vein. Several ligatures are usually applied in each case, and at the same time. The ligation is made by traction on the wires, and by twisting them.—*American Medical Monthly.*

APHORISMS ON RODENT ULCERS.

(1.) That there occurs not unfrequently on one or other part of the face, a form of ulceration, which is characterized by an indurated edge, and by a tendency to spread to adjacent structures, without regard to difference of tissue; which is very slow in its progress, does not cause much pain, does not induce cachexia, and is never followed by enlarged glands or deposits in the viscera.*

(2.) Sections of the indurated edge of this ulcer (or of the portions of new growth which are sometimes produced about it) do not exhibit the cell-structures met with in epithelial or scirrhous cancer, but only those of organizing fibrous tissue.

(3.) This ulcer differs from lupus exedens, in that it never occurs in the young, and never gets well spontaneously, while lupus exedens but rarely begins after the age of thirty, and usually tends after the lapse of time to cicatrize spontaneously. The two, also, further differ in, that lupus has a tubreculated, inflamed border, without any great degree of induration; while the edge of the ulcer in question presents an extremely indurated ridge, without tubercles, and comparatively free from inflammatory congestion.

(4.) The ulcer in question differs from cancer, in that there is but seldom present any tendency to the production of new material; that it never causes the glands to enlarge, nor induces morbid growths in the internal viscera.

(5.) Although it must be freely admitted that this disease is closely allied to cancer, and that in its inveteracy under treatment, and its tendency, if not removed, to spread deeply and extensively, it well deserves the designation of "locally malignant," yet it is inconvenient in practice to call it "cancer of the skin," since there are other forms of cutaneous cancer, (the epithelial, scirrhous, melanotic, etc.,) essentially different from it, and of a far higher degree of malignancy.

(6.) The term "a peculiar ulcer occurring in the eyelids," is too vague, and also involves an erroneous statement as to uniformity of location: an objection which, also, in addition to what has been stated above, applies to "cancer of the eyelids," since this ulcer is not met with on many other parts beside the palpebræ.

(7.) To the designation of Rodent Ulcer given to this disease by Lebert, and adopted in this country by Paget, (see Lectures on Surgical Pathology,) no objection applies, excepting that it is more vague than desirable. Of those in use it is certainly the best, and should the disease become generally recognized by the profession under that name, the vagueness of its meaning will, by custom, soon cease.

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* In making this assertion, I am borne out by all the facts hitherto recorded. Fully acknowledging, however, the near relationship of rodent ulcer to cancer, I have but little doubt that it will now and then so far deviate from its usual course as to affect the glands, and quite anticipate in the future to hear of such a case. Epithelial cancer may be said to almost never affect the internal organs, yet a few cases are on record in which it has done so. Such exceptions, however, only prove the general rule, and just as the epithelial cancer very exceptionally affects the viscera, so will rodent very exceptionally affect the lymphatics. Professor Langenbeck has mentioned to me a case in which he excised a rodent ulcer from the side of a woman's nose, who afterwards remained well for nine years, and was then attacked by cancer of the uterus, followed by secondary growths and death. Such a fact is, however, very different from one in which the cancerous infection should advance, as in other malignant disease, through the lymphatic system, from the original ulcer.

(8.) The Rodent Ulcer is most commonly met with between the ages of 50 and 60, and is equally frequent in the two sexes.

(9.) It occurs but very rarely on any other region than the integument of the face, and is most common in the eyelids.

(10.) It is a singular and very significant fact, that no case has yet been recorded in which the rodent ulcer attacked the lower lip, either primarily or by extension, while that part is well known to be a very frequent seat of epithelial cancer.

(11.) The *Diagnosis* of Rodent Ulcer is usually easy. An ulcer with a hard sinuous edge, situated on some part of the skin of the upper two-thirds of the face, of several, or perhaps many years' duration, almost painless, and occurring in a middle aged or elderly person, of fair health and without enlarged glands—such a sore is almost certain to be of the rodent type.

(12.) The *Prognosis* of Rodent Ulcer varies with the stage of the disease and the treatment it is intended to pursue. If left to itself it will slowly, but surely, advance both in extent and depth, and will probably destroy the patient's life in the course of from ten to twenty-five years, death being eventually produced by the exhaustion consequent on suppuration, hemorrhages, pain, etc., and very probably aggravated by inability to take sufficient food, owing to the diseased state of the mouth. If the case be seen in an early stage, while complete removal either by knife or escharotics is practicable, a favourable opinion may be given as to the probable non-return of the disease. The younger the patient, the more rapid will be the course of the disease, and *vice versa*; and the younger the patient the more nearly is the disease allied to cancer, and the more likely to recur after removal.

(13.) The only *Treatment* which the rodent ulcer admits of is local, and the best is that which obtains its freest removal with the least injury to the parts concerned. In some localities, and in some stages, escharotics, such as the chloride of zinc, may be advisable, but in most, excision and transplantation of skin is the more certain and satisfactory.

(14.) A widely-diffused knowledge of the true pathology of rodent ulcer may be expected to result in considerable advantage to the sufferers from that disease, since it will encourage to the early and free adoption of local measures, and to the employment of excision and transplantation, even in some cases which, if considered cancerous, would certainly be beyond relief by surgical art.—*American Medical Monthly.*

MEDICINE.

NEURALGIA.

In the Pennsylvania Hospital Reports, Professor J. F. Meigs mentions a case of *sciatica* that proved somewhat rebellious. The patient's sufferings were so severe that subcutaneous injections of morphine were frequently, and on several occasions resorted to. Opium, valerian, iron, iodide of potassium, wine of colchicum, were resorted to in turn, with but little or no improvement. "Todd's anti-neuralgic mixture, which consists of 15 grains of bi-carbonate of potassa, 10 drops of tincture of opium, and 5 grains of nitrate of potassa," was next resorted to, with an occasional subcutaneous injection of morphine, under which the patient steadily improved.

We refer to this case for the purpose of mentioning a fact that we believe not to be sufficiently well understood. In cases of a rheumatic or neuralgic character, of which sciatica is a type, we regard *strychnine* as the all-important remedy. In the last five years we have trusted all such cases to it, and it never has once disappointed us. We have generally commenced with one-twentieth of a grain dose, and increased slightly. Decided improvement will be manifested within a week. Where the paroxysms of pain

are severe, as the action of the strychnine is not immediate over pain, opium by the mouth of the subcutaneous injection may be resorted to. The following mixture is a favourite one with us under these circumstances.

R.—Tinc. aconite,	ʒ j.	
Tinc. opium,	ʒ vij.	
Tinc. cimicifuga.	f. ℥ j.	Mix.

Dose—a tea-spoonful. To be repeated as may be necessary to control the severe pain. In malarious regions quinine may be appropriately associated with the strychnine in mixture. We do that quite often even in non-malarial cases. Neuralgia is generally a disease of the enfeebled.—*American Medical Monthly.*

AROMATIC SULPHURIC ACID IN THE TREATMENT OF TAPEWORM.

By B. Darrach, M.D., Quincy, Ill.

Tænia has pre-eminently its fashionable remedies. Kousso, after being lauded as a sovereign cure, and sold at extravagant prices, has been laid aside, like many of its predecessors. Emulsion of pumpkin-seeds, I apprehend, is destined to the same fate; I have seen it fail in a case, where a year previously it had expelled twenty-four feet of the parasite, and where turpentine was subsequently used with success. Will the profession then pardon me if I bring another remedy to their notice, that it may have a trial which can alone test its value. I am indebted for the facts to my fellow-practitioner, Dr. Adams Nichols, and publish them with his concurrence.

On the 5th of February last, the doctor was called to see Mr. P———, farmer, aged about 35, native of this vicinity, and living a few miles from town. He had been suffering for three months with vague pains in different parts of his body; was debilitated and emaciated; had some cough; a slight expectoration, and obstinate constipation. When I saw him for the doctor on the 10th, he had the appearance of a phthisical patient. On Dr. Nichols' second visit the patient exhibited a discharge from his bowels, which had alarmed him; to use his own expression, "his bowels were all coming away from him." Upon inspection, the discharge was found to be a mass of tapeworm several feet in length. He was ordered aromatic sulph. acid ʒ j, water Oiss; to drink of it as often as he could until he had used it all. On the third day he passed about a pint of the worm in fragments, and apparently partly digested. The dose was repeated on the fourth day as a precaution, but without expelling any more of the animal.

Feb. 24. Reported himself: bowels regular, cough gone, appetite good, gaining flesh, and no symptoms of the worm.

Since the above date he has entirely regained his flesh and strength, and has perceived no indication of a return of the parasite.

The above remedy was brought to the doctor's notice in rather a singular manner, about thirty years ago, while practising on Cape Ann, Mass. An old woman sent for him one afternoon to visit her, and greeted him on his arrival with the announcement, "Doctor, I've got a tapeworm!" The doctor not finding any very satisfactory evidence of the presence of such a creature, tried to laugh her out of the idea, and left her. A few days after he was summoned again, when she told him—"Doctor, I've killed my tapeworm, and there he is!" showing a vessel half filled with the animal. On inquiry as to what killed it, she replied—"Well, I felt him a poking his nose into my stomach again this morning, so I took a teaspoonful of elixir of vitriol. I thought that was the sourest thing I could find, and gave it to him for his breakfast." Subsequently the doctor met with two other cases on Cape Ann, and profitting by his experience in the case of the old woman, treated them successfully with the acid, giving ℥ j in several ounces of water in the course of three or four hours.

A few years ago, in this city, Mrs. M———, a feeble woman, having kept her bed for five months, and at the time very low from a recent confinement, was surprised one

morning by the passage of about five feet of tapeworm. Turpentine was administered for two days, without success. The acid, which had for the time been forgotten, was then given—three teaspoonfuls in twenty-four hours, in sweetened water, when a long worm was expelled. The patient speedily regained her flesh and strength.

All of these cases, excepting the first, remained under observation for some years, without any return of the worm. In all, the discharged worm was in the same fragmentary and semi-digested state. Finally, the doctor says, the remedy has never failed with him.

QUINCY, *Ill.*, *Aug.* 10, 1860.

CHLORATE OF POTASSA IN DIPHTHERIA.

Before the Cincinnati Academy of Medicine, the subject of diphtheria came up for discussion. The *chlorate of potash* was a favourite remedy with most of those who had had experience with the disease. We quote one remark bearing upon prognosis. Dr. Murphy says, that "when there is an issuing of the plastic matter from the nostrils of the patient, the disease always terminates fatally!"—*American Medical Monthly.*

FALSE MEMBRANE IN DIPHTHERIA.

In several good cases Dr. Beale could find no traces of fungi. In one specimen in which vegetable organisms were discovered, they were proved to be of accidental presence. The membranes seemed to be delicately fibrillated in its entire thickness, and contained a number of small faintly-granular corpuscles. In some cases the membrane was quite composed of cells, which closely agreed in character with pus-corpuscles.

Several interesting cases illustrating the general and minute structure of the diphtheretic membrane may be seen in the last volume (No. x.) of the "Transactions of the Pathological Society," pp. 311–334.

MIDWIFERY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Mr. SPENCER SMITH, Vice-President in the chair.

CASE OF EXTRA-UTERINE GESTATION.

By Mr. ADAMS of the London Hospital.

THIS case has been frequently alluded to in the pages of the *Lancet*. The woman's age was 28, and she was in other respects a healthy woman. She became pregnant in January, or the beginning of February, 1859, and passed through the usual stages of her condition with no suspicion that anything extraordinary had occurred until the latter end of October, when she expected to be confined. She never had any distinct morning sickness, although she suffered from nausea and other signs of indisposition. Mr. Williams of Plaistow, Essex, was engaged to attend her, but when her full period had passed nothing but a discharge of blood took place from her vagina and pieces of flesh-like substance were expelled in gushes; there were no distinct urine pains. Milk was secreted in her breast, and in February, 1860, menstruation recommenced, and has continued ever since uninterruptedly. In March the milk disappeared from her breasts. At this time she was seen by Dr. Ramsbotham and Mr. Adams who both agreed that an extra-uterine fœtus existed, and she was advised until six months had elapsed from the termination of her full term, so that the cyst might be further consolidated with the peritoneum. The tumour was irregularly ovoid in shape, its long axis vertical, and

it was situated towards the right side of the umbilical and iliac regions of the abdomen; the abdominal walls could be moved to a slight extent over the surface of the tumour. It was not possible to distinguish the individual parts of a fœtus. Gastronomy was performed on the thirty-first of May, and she left the hospital with a small fistulous opening at the lower part of the wound, whence a slight quantity of fœtid discharge continued: this has since disappeared. In this case no attempts were made to extract the placenta as, on traction by the funis it appeared firmly adherent. The child was delivered by the breech. The patient went on uninterruptedly well. The author entered rather fully into the question of the propriety of performing gastortomy in cases of extra-uterine gestation; and after giving due weight to the arguments which may be fairly advanced against an early operation, and prior to the commencement of any distinct indication of nature, as evinced by ulceration or suppuration, came to the conclusion that such an operation is quite justifiable. He advocated delay for some time after the end of the full term, to favour the opportunity for the consolidation of the cyst to the peritoneum, so as to avoid the additional risk of perotinitis. In this case the peritoneum was opened without any inconvenient consequences. He (Mr. Adams) had seen the patient that day. The wound had entirely closed. There was no evidence of any escape of the placenta beyond that which he had already stated in the paper.

Mr. Spencer Wells asked for some further information than he had gathered from the paper as to the possibility of removing the cyst with the attached placenta in the case just related. So far as he (Mr. Wells) understood the description, the cyst was peritoneal, cavity, free and unattached on its left side, while on its right side it was adherent to the abdominal parietes. It was so free that when the child was removed, it contracted or collapsed. This being the case, it would depend upon the extent and firmness of the adhesions on the right side, and upon the nature of the connexion with the Fallopian tube and uterus, whether a surgeon would be justified in attempting to remove the cyst with its contained placenta rather than leave both to the slow process, Mr. Adams' patient had gone through. Supposing the adhesions not to be very extensive, and the connexion with the uterus to be only by means of the Fallopian tube, it would seem at first sight, to be better surgery to remove both cyst and placenta than to leave them. It was one thing to attempt to separate the placenta from the cyst, another to remove both together. He (Mr. Wells) congratulated Mr. Adams most warmly on the very successful result of the interesting case he had recorded; but as a guide to some rule of practice in future cases, he asked for a more detailed account of the amount of adhesions and of the nature of the connexion between the cyst, the Fallopian tube, and the uterus.

Mr. Adams said it was true there were considerable adhesions on the right side of the tumour, whilst the left was comparatvely free. He had refrained from further interference in this case from a desire not to add to its gravity. The circumstances were peculiar, and altogether different from those which appertained to an ovarian cyst. It was impossible in the case to determine the exact amount of adhesion, and how far these adhesions implicated important parts; besides, we are ignorant at present to what extent the placental vessels were connected with the circulation of the mother. Under all the circumstances he thought the best practice was to do no more than was necessary. In another case referred to in his paper, rude attempts were made to remove the placenta and the surgeon cut away a portion of the cyst; the patient died. There was no analogy between ovariotomy and this operation, but ovariotomy might, in some cases, looking at the amount of adhesion to be broken up, the division of the pedicle, &c., be a more dangerous proceeding than this one. In this case a portion of the omentum had protruded, and was cut away. No ill-effects followed, but as no advantage could result from the proceeding, he should, if such a case occurred to him again, simply replace the protruding part, and avoid the hæmorrhage consequent upon his excision. He thought the mode of dressing employed in this case advisable, and considered that the simple application, of the ligature through the skin and adjacent cellular tissue, less dangerous

than when it was passed through the muscles and peritoneum, the plan adopted by some operators in cases of ovariotomy. In this case the simple bandage and cotton pad were kept in close approximation to the wound, which was left undisturbed until all risk of perotinitis had passed.

Mr. POLLOCK inquired if any case of extra-uterine fœtation, was on record outside the Fallopian tube? This question, he thought, bore on the operation of the removal. In ovariotomy, the disease wss formed by the organ itself but in Fallopian pregnancy the tube might be said only to contain the diseased mass.—*Lancet.*

LABOR WITH UNRUPTURED HYMEN.

In the *Boston Medical and Surgical Journal*, Dr. C. E. Buckingham reports a case of a lady who was twice delivered of a full-grown child, without rupturing the hymen. Before the head of the child, it gradually merged into an extension of the vaginal walls. Another circumstance worthy of remark in regard to this case during one of the periods of gestation, was the great power of the uterus to retain its contents. Because of uncontrollable vomiting, it was thought best to produce abortion. The uterine sound was passed four inches into the uterus and swept about, at two different times; at one time blood followed, and at the other a gill of water. A sponge tent was introduced into the cervix uteri and repeated after its expulsion. In addition to these means, the patient took, in four days, a pint of decoction made from an ounce of cotton-root bark, and four ounces of Tilden's fluid extract of the same drug. Notwithstanding all this, she carried her child for four months longer, and was delivered at full term of a full grown and healthy child.—*American Medical Monthly.*

INTRA-UTERINE DISLOCATION OF THE KNEE-JOINT.

In the *Boston Medical and Surgical Journal*, for October 25th, Dr. J. Youmans reports a case of complete dislocation of the left knee, discoverable at birth. He supposes the dislocation to havs been intra-uterine, and gives reasons for this opinion. So far as we know, this case is unique. We cannot well see how a knee joint could be dislocated in the womb by any injury that would not have proved extremely injurious to the mother. The fact that it *would not stay replaced*, but "flew back, as with a spring, to its forme. position," is presumptive evidence that the false position was taken, if not before ossification commenced, at least very early in that process.—*Amercian Medical Monthly.*

LIQUOR AMNII CONTAINING UREA AND CASTS OF THE URINIFEROUS TUBES.

Urea, to the extent of 3·50 per 1000, was found in this specimen, and also casts of the uriniferous tubes of the fœtus, proving that the urine becomes mixed with the liquor amnii during the later months of pregnancy.

COMPLETE INVERSION OF THE UTERUS AT FOUR MONTHS OF UTERO-GESTATION—REPLACED SIX DAYS AFTER THE ACCIDENT.

By E. W. WOODSON, M. D., of Woodville, Ky.

On the 2d of Aug. 1859, I was called in consultation to see Mrs. G——, aged 27 or 28. Had been pregnant about four months. While engaged in washing, some distance from the house, violent labour pains came on, so severe that she could not get to the house. Being very much alarmed, and feeling the fœtus protruding through the vagina, she took hold of it, and with great force pulled it from her, bringing the uterus entirely out, thereby producing "complete inversion." Not understanding the nature of the accident

she forced the uterus back into the vagina, after tearing off most of the placenta, and did not call for medical aid until five days had elapsed. She then sent for her family physician, who had me called in as soon as he ascertained the nature of the case.

Upon examination, I found the womb barely inside the vagina, the fundus presenting externally, and about the size of a large pear, a portion of the placenta, almost decomposed, still adhering. I introduced my hand, (having no instrument with me), and attempted to replace it by making steady pressure against the fundus. Was forced to desist on account of the great pain produced by cramping of my hand. I ordered the vagina to be cleansed by warm, bland injections, gave an anodyne, and left her until next day. I then had an instrument made similar to "Simpson's Uterine Sound," except not so much curved, with a ball at the end, size of a half oz. bullet. Upon my second visit, I introduced the speculum and passed this instrument through it, placing the ball exactly against the fundus, and made steady pressure for some moments, when I had the satisfaction of feeling it give way, at first gradually, then suddenly with a jerk, the instrument passing up some two and a half or three inches. The pain was not very great, and the patient expressed great relief as soon as it was replaced. The loss of blood was not great or alarming, although it had continued from the time the accident occurred.

She recovered without a bad symptom, and much sooner than I expected. Her being remarkably robust, and in excellent health previous to the miscarriage, accounts for the favorable result.

INTRA-UTERINE EMPHYMESA OF THE LUNGS.

Prof. Hecker relates (*Virchow's Archiv.*, 1859,) the following very important case in reference to the medico-legal questions of live or still births. During his residence at Marbourg he observed the following circumstances: a primipira, aged twenty-two, was in labour at 3 A. M. of the 7th of March, having suffered light contractions for two days previously. The conjugate diameter was defective by an inch. The liquor amnii escaped at 11 A. M., the os uteri being now partially open. The pains were very inadequate, and at this time the fœtal heart, which had been hitherto plainly audible in left side of the uterus, could no longer be heard. This was the state of things at 4 A. M. of the 8th, when the labour began to proceed rapidly, the child being born without assistance at five o'clock. It was born showing no trace of motion of the head, or of breathing-movement; no efforts at resuscitation availed, it was quite dead. The body was examined six hours afterwards. It weighed seven pounds. There was no trace of putrefaction. The lungs were of a large circumference, filling the chest, partly covering the pericardium; they were brighter than usual, grey-red, and felt spongy. They floated freely in water; they were extensively emphysematous.—*Brit. and For. Med.-Chir. Rev.*, July, 1860.

INTRA UTERINE FRACTURES.

Mr. B. E. Brodhurst read a paper on this subject before the Royal Med. and Chirurg. Soc. (March 27, 1860). He commenced by referring to some points of distinction which have been observed in fractures in utero. He stated that fractures might be simple or compound—disunited or reunited at birth; or that solution of continuity might be owing to imperfect ossification and congenital rickets. Having alluded to these several varieties, he proceeded to remark especially on reunited fractures in utero; and he quoted cases from Ploucquet, Kopp, Devergie, Carus Schubert, Sachse, and Moffatt; relating, also, to cases which had occurred in his own practice. The causes of intra-uterine fracture were lastly considered; and it was stated that neither contra-coup nor compression by the walls of the uterus could act so as to produce fracture, so long as the membaanes—the chorion and amnion—remained entire; but there was no

reason to believe that intra-uterine fractures occurred as effects of physical injuries—that the origin of these fractures and of congenital distortions were similar, and that they were occasioned by abnormal muscular action. Two cases of congenital double club-hand and double club-foot were adduced as examples of the mode in which abnormal muscular action and distortion are induced in the fœtus; and, moreover, the author stated his belief that, in these cases, whether of fracture or distortion, the effect varies as the cause varies, and that temperament or other like condition may probably also modify the effect.—*Med. Times and Gazette.*

MEDICAL JURISPRUDENCE.

CIRCULAR SPORULES IN URINE CLOSELY RESEMBLING BLOOD CORPUSCLES.

The urine was acid, containing many sporules closely resembling, in form and size, the red blood corpuscles. Many bodies were observed with a point in the centre, and larger than a blood corpuscle. This resemblance could, of course, not be a source of deception in cases where the blood-corpuscles were numerous, as then albumen would be detected. In this case no albumen existed. In doubtful cases, time will bring about the germination of the sporules. Moreover, blood-corpuscles can always be distinguished by the ragged edges which form on maceration, and by the difference of their refractive power; and the circular crystals of oxalate of lime, not unlike these sporules, are unaltered by remaining in the urine.

DISTINGUISHING BLOOD-STAINS.

Before the coroner's jury in the recent murder case in this city, Professor LEIDY gave the following testimony, which will be read with interest:

September 28th to October 1st—made numerous examinations of blood stains on a piece of oilcloth, and other substances, submitted to me September 27, by officer Schelmm, at the request of Mr. Mann.

Repeated microscopic examinations of the stains exhibited many of the peculiar corpuscles which characterize blood.

Made a number of microscopic measurements of the blood corpuscles of the blood stains.

The blood corpuscles had the circular discoidal shape, and the structure of those of man and other mammals generally.

By comparison with my own blood, dried and treated in the same manner as the stains, the blood corpuscles of the latter were observed to correspond with those of the former, in shape, structure and measurement.

Too much importance, however, should not be given to these facts, as has been by high anatomical authorities, for the blood corpuscles of the horse, ox and hog, closely resemble those of man, and differ only in being smaller. Those of the dog are also of the same shape and structure, and even closely approximate in size the blood corpuscles of man.

The blood of a chicken, in the fresh state, exhibited the oval, discoidal corpuscles longer than those of man, and containing an oval nucleus. The chicken blood, dried and treated in the manner of the blood stains, exhibited none of the characteristic oval corpuscles. These had all ruptured in the drying and subsequent solution, but their nuclei remained unbroken. The nuclei were exceedingly abundant, oval, and about half the size of the blood corpuscles of the stains of my own blood. Excepting

these small oval nuclei and some fat globules of no definite size, no corpuscles were observed in the dried chicken blood resembling those of the blood stains.

A number of flattened oval bodies, of variable size mingled with the blood stains, and bearing general resemblance to the corpuscles of chickens and other bird blood, by treatment with iodine turned blue, thus proving to be starch granules, prevalent everywhere as a constituent of dust. No other bodies, resembling the blood corpuscles of chickens' blood observed in the blood stains.

Several small grey and brown hairs, mingled together with dirt in the blood stains, proved, on microscopic examination, to be hairs of the horse. No feathers or hairs like those of chickens, nor hairs like those of man, were observed mingled with the blood stains. Some small pebbles and chips, with the blood stains, were treated with water. The solution by boiling emitted the odor of blood coagulated in part, and assumed a dirty, grey appearance; solution of potass dissolved the coagulum, and the resulting liquid presented a red colour, by transmitted light, a greenish hue by reflected light The double color has been considered as one of the peculiarities of blood.

Inferences.—That the blood stains strongly resemble, in their constitution, those of human blood: the blood of the dog, the hog, the ox or the horse; that the blood stains bear comparatively little or no resemblance, to those made by the blood of the chicken or other birds.

BODIES RESEMBLING SPERMATOZOA FROM THE URINE OF A WOMAN.

These bodies were found by Dr. Beale in the urine of a patient of Mr. Cæsar Hawkins's, in St. George's Hospital. Many of the organisms were exactly like spermatozoa, and might certainly have been mistaken for them; but on examination of a number of specimens, it became evident that they were really vegetable organisms. This fact is one of great interest and importance with reference to questions of supposed rape. Dr. Beale had never before met with structures liable to be mistaken for spermatozoa.

MISCELLANEOUS.

BREAD.

The term "bread" may be considered as a generic word, including in its signification biscuit, cakes and pastry. People of all countries, with few exceptions, prefer "raised," or light and porous bread, to the unleavened kind. Bread may be raised by three means: by the use of leaven, dough or yeast, in a state of fermentation; by the mechanical introduction of carbonic acid; and by the chemical liberation in the dough of carbonic acid from some substance with which it is combined. If the first method is properly conducted, it is quite unobjectionable; but if, as is often the case, fermentation is allowed to proceed too long, acetic and lactic acids are formed, and some of the complex nitrogenous substances arising from the decomposition of the plastic bodies of the flour. Saleratus or soda, to sweeten the sour sponge, is now the resort of the cook; and the result is an unpalatable and unwholesome loaf, unworthy the name of bread much less of food. The second method is impracticable in the family, where the large amount of bread consumed is and must be made. The third plan is to introduce carbonic acid, in combination with soda, bi-carbonate of soda and an acid—such as tartaric—which, combining with the soda to produce a neutral salt, liberates the carbonic acid, and thus renders the bread light and porous. Instead of tartaric acid, cream-of-tartar (a bitartrate of potassa) is commonly used to decompose the soda, and the resulting compounds left in the bread are tartrate of soda and tartrate of potassa. Whatever may be said of the wholesomeness of these two bodies, they are, to say the least, quite

as palatable and as desirable as the acetic, lactate or butyrate of soda or potash, which would be formed by the attempt to sweeten a sour sponge raised by the first method—by the use of soda or saleratus. But "cream-of-tartar and soda bread," as it is called, is dry and tasteless, especially when cold; so is fermented or unleavened bread, unless the fermentation is arrested by baking at *just the right time*. Ordinarily, as is well known to those acquainted with the philosophy and practice of making good bread, this "*right time*" is a period of short duration, and I presume it is within the bounds of truth to declare that not one loaf in one hundred is raised and baked when it should be. The circumstances which modify the time in which the fermentation may take place are so varying that it may occur in thirty minutes or twelve hours. The sponge requires constant watching, and this, in the multitudinous duties of the kitchen, it is not always possible to secure. The difficulty of always securing good bread by this method is so great, among the masses, that dietetists and housekeepers have, for the most part, come to the conclusion that, could any substance be devised for combination with soda, in bread-making, that would be free from the objectionable features of cream-of-tartar and at the same time supply the desirable and essential elements of nutrition, a great benefaction would be conferred upon the human family. Such a discovery seems to have been made by Professor Horsford, and I think that if what your correspondent (L. K.) says of the want of "phosphates in the blood" and of "thin bones and rotten teeth" is not clearly shadowed forth in the following extracts from a circular of the professor, it is at least clearly shown that the article devised by him will supply what L. K. considers (and what is in fact) so much needed:—

My attention was called, five years since, to the necessity of a substitute for cream-of-tartar, as an article of domestic consumption. It was represented to me by extensive dealers, that the production of cream-of-tartar was no longer equal to the demand, and that the greatly increased consumption in the arts and for culinary purposes, has caused its price to rise, until it seemed possible that for some important purposes its further use must be given up. It was also stated, that its high price had led to frequent adulterations, some of them of more than questionable character in their relations to health. Upon these representations, I undertook the solution of the problem as one of great public importance.

Among the essential qualities of a substitute for cream-of-tartar, in the preparations of all forms of light bread, cakes and pastry, are, that the article should be at least as unobjectionable as cream-of-tartar in its relations to the animal economy—that it should be pulverulent—and that when mixed with bicarbonate of soda and flour, it should, on the addition of moisture or application of heat, yield a neutral salt, and set free carbonic acid. If, in addition to these qualities, an article should be devised which should possess in the form in which it is used, unquestionable excellence as an element of food, its value would be placed beyond doubt.

I tried in a great variety of ways, as numerous others have tried without success, to find some form of muriatic acid which could be mixed with bicarbonate of soda, so as, after raising the dough or paste, common salt should be found in the product. To this most desirable end, insuperable difficulties presented themselves. I sought some form of harmless organic acid, suited to all the conditions of the problem, but this effort and many others were alike fruitless. At length it occurred to me, to find, if possible, an acid constituent present in all the cereals and healthful food, and place this in the necessary conditions to fulfil the wants of the problem—and at the same time, in such form, that when taken into the system, it would be suited to the agencies there in action, to be absorbed, if needed, or readily and healthfully removed, if not required. Of all such constituents no one is so important as phosphoric acid. Physiological and chemical research have shown, that wherever in the body there is an organ of important functions, there nature has provided a store of phosphates. They are present in the juices, the tissues, the muscles, and in large measure in all the brain and nervous matter, and in larger measure still, in the bones. The grains we consume contain them.

The flesh we eat contains them. The bones we boil and dissolve contains them. The French army was formerly supplied with rations of dissolved bone, prepared at high temperatures in Papin's digester, in the form of small cakes, which a little hot water resolved into soup. The bran which we withdraw from our wheat contains fourteen times as much phosphoric acid as the flour which we convert into bread. The natural provision in the animal economy for the removal of surplus phosphates, as in the waste and renewal of the bones, is well-known.

All these considerations led me to the conviction that, if it were possible to prepare phosphoric acid in some form of acid phosphate of lime, such that, after its action with moist carbonate of soda, it would leave phosphate of soda (a constituent of the blood), and phosphate of lime (an essential constituent of food) and confer upon it the necessary qualities of a dry, pulverulent acid, the end would be so far attained as to justify a practical experiment in domestic use.

I succeeded in producing the article in condition to meet the wants of the problem. I then introduced it into my family for use in all forms, as a substitute for cream-of-tartar for culinary purposes. When many months of daily use had assured me that my theoretical views were sustained by practical application, I gave it into the hands of friends, whose prolonged experience fully confirmed my own. It has been in constant use in my family now for more than four years, and in the form of yeast powder, during this time, it has been produced and consumed in all parts of the country to a very large extent, settling, in the most satisfactory manner, all questions as to its serviceability and healthfulness.

The article is prepared according to instructions furnished by myself, as the result of long continued experiment, and it will be produced of invariable purity and strength equal to that of cream-of-tartar.

E. N. Horsford.

Of the same purport, and having a direct reference to this case, are the views of Dr. Samuel Jackson, Professor of the Institutes of Medicine in the University of Pennsylvania:—

Your substitute for cream-of-tartar for the raising of bread is a decided improvement. The tartaric acid is not a constituent of the grains from which flour is made; it is not a nutritive principle, and often disagrees with the alimentary organs. The phosphate of lime, which is the principal ingredient of your preparation, is an essential constituent of all grains. It is further an important nutritive principle; and recent experiments have proved it an indispensable element in the construction, not of bones only, but of all the animal tissues. A deficiency of the phosphate of lime in food is a common cause of ill health, of defective development and retarded growth in children. In the conversion of wheat into flour, the phosphate of lime is rejected with the bran; and, in consequence, this necessary element of nutrition, contrary to the arrangement of nature, is not obtained from our fine wheat bread. Your preparation, while it makes a light, sweet and palatable bread, restores to it the phosphate of lime which has been separated from the flour, and thus adapts it as an aliment for the maintenance of a healthy state of the organization.

Samuel Jackson.

Of a like import are the expressed opinions of chemists and physicians of acknowledged high character and standing, which might be continued at length.

If these facts were properly placed before the public, there would seem to be no longer any excuse for having bad and unwholesome bread.—*Scientific American.*

THE

British American Journal.

MONTREAL, JANUARY, 1861.

BEARDS OR NO BEARDS.

We see no reason why the subject of the wearing or non-wearing of beards, should not be discussed, or at least considered, in a medical Journal, and the more especially as the wearing or cultivation of them is alleged to be intimately associated with individual hygiene. This might plead our excuse for our present notice of the subject, but we have another which we now give. Early during last month, our esteemed contemporary the Medical and Surgical Reporter of New York waxed eloquent and argumentative on this very subject. The cold weather was then setting in, and this, together with the fact that the London *Lancet* had a short time previously descanted learnedly and long upon the same theme in condemnation of the Colonel or Commanding Officer of a regiment who had ordered the soldiers under his command to shave themselves, had both probably contributed to the inspiration. Perchance also the Editor himself had been cultivating those emblems of manhood, and was rejoiced to find his justification of the practice in the *renommée* of the London Journal in question, which thus in good time came to his assistance. Be the reasons however what they may, we are by no means satisfied of the cogency of the arguments advanced in justification of the practice, and would take the liberty of stating, with all humility, our reasons of dissent.

We will give, in the first place, the arguments in favour of the practice as advanced by the New York Reporter and the London Lancet.

1. The practice of shaving the beard is stated to have originated at the coronation of Louis XIII of France, in adulation of whom, then nine years of age, "his courtiers commenced the foppish practice of shaving."

2. The gaining prevalence of wearing the beard, as "now exhibited by all enlightened nations." Thus, "the wearing of the entire beard has become general in Europe, and even the English, heretofore the most closely shaven of all nations, have at last adopted the 'valenced' face."

And according to the London Lancet:

1. " Nature has ordained that the face of man shall be protected in certain parts by a hairy covering. Be it for use, be it for ornament, or be it for both, there it is in the form of beard, moustachois and whiskers."

2. Bichat's assertion that there exists " un certain rapport entre elle (la barbe) et les forces ; " ergo, that the beard is intimately associated with the physical or muscular energy of the individual, and that " this energy always diminishes a little when a man deprives himself of that appendage."

3. The example of Walter Savage Landor, who was cured of his disposition to " sore throats," by following the advice of the " surgeon of the Grand Duke of Tuscany," to let his beard grow.

4. According to Mr. Chadwick, the sappers and miners of the French army, who are remarkable for the size and beauty of their beards, " enjoy a special immunity from bronchial affections."

In regard to the origin of shaving, nothing need be said, we presume. That the feeling of a greater necessity for cleanliness led to the invention of the razor, we doubt not; but whether this occurred at the time specified or not, is not a matter of the least consequence.

We must certainly demur to the second reason advanced by our New York contemporary, and express a well founded doubt of its accuracy. If the Manchester and Sheffield razor manufacturers were asked if the demand for razors had diminished, we think that little difficulty would be experienced in giving their answer.

The question however, is met with something like argument in the *Lancet*, which says: " That nature had ordained that the face of man shall be protected in certain parts by a hairy covering." To this general proposition, we take the strongest exception. Of the several varieties of man, only one is characterized by the possession of a beard, and this one is the Caucasian, from which we are descended. Some of the other varieties possess beards, it is true, but so scarcely deserving of the name, that it cannot be, and is not, assigned them as a distinguishing characteristic. The *Lancet* moreover asserts, that beards were intended as a protection against the injurious impression of cold. If so, then we ought to find, that those races of men who inhabit the Arctic regions should be most liberally, nay bounteously, supplied with beards. But is this case? Far from it. The Esquimaux, the Laplanders, the Kamschatdales, the Tartars, have notoriously none. This argument therefore falls.

It has again been asserted, and with great plausibility, that the moustache and beard situated opposite the nostrils and mouth, and in a manner concealing them, retain or arrest light particles of matter floating in the atmosphere, and thus prevent them getting access to the lungs. But if nature had designed them for this use, we ought to find that the inhabitants of tropical regions should be well supplied with such important appendages. That they are not so, examine the branches of the Malayan and Ethiopian varieties of man.

No ; the beard is a distinguishing trait, or feature, of the Caucasian race of men only, and is as much so as is the shape of the head, and the facial angle. Why it has been so ordained, is a question more easily asked than answered.

But again, if nature had given us beards as a protection against injurious im-

pressions of cold, why has she, who has been otherwise so lavish of her gifts, denied them to woman. It may be urged that woman is not so much exposed, nor so necessarily, to the inclemencies of season, as man. But this argument does not hold true with regard to many nomadic tribes, whose women are equally as much exposed as the men. It has been again asserted, that the want of beard in woman is atoned for by the greater development or depth of adipose tissue in her neck and breast. Surely it is enough only to state such an argument, to avoid the necessity of exposing its absurdity.

Bichat's reasoning is consonant with experience, that there does seem a connection between an excess of hair on the chin (and body we will add) and muscular ability. But that this corporeal energy is any way affected by tonsorial procedures, is a point to which every man of common sense will at once demur. In the case of Samson, the locks upon which his physical strength were made dependent, were situated on his head, not on his chin, and this is very probably the origin of the idea, as it is well known that when the were removed by Delilah, his strenth departed. Our barbers are not now-adays Delilahs.

In fact, the more that the arguments for permitting the growth of the beard are examined, the more untenable do they become, and in some instances the more absurd. The practice of shaving is a good one in many respects. Above all it possesses the argument of cleanliness in its favour. We admit that there may occur instances or occasions, in which it might become a matter of necessity to permit the beard to grow, as for example, in the case of cutaneous diseases affecting the lips, chin or throat; or in the case of an army in the field, where it might be impossible to secure the time or the essentials for the operation; but under all ordinary conditions of civil life, we think the practice of permitting moustachios and beards to grow, one that has nothing in the shape of common sense to recommend it, but on the contrary, suggestive of everything but what is cleanly or gentlemanly. And what is more, we do not consider the argument for wearing a beard as a protective against cold, at all comparable with frequent and plentful ablutions with cold water without one.

THE GENERAL HOSPITAL OF THE DISTRICT OF RICHELIEU.

We are pleased to observe that steps are taken to build and establish an Hospital in this town. A subscription list has been liberally signed by the inhabitants of the town itself, but complaints are uttered that the wealthy inhabitants of the surrounding country are backward in supporting the project. As it is by no means improbable that the majority of the future patients will come from the country districts, we much fear that this lukewarmness on the part of those the most interested, will prove the means of excluding many a deserving object of charity. It is contemplated to commence the erection of the new edifice in the ensuing spring, the plan of which is pronounced extremely fine. We sincerely wish the promoters of the project the most complete success.

During the last Session of the Legislature an Act was passed (23 Vict., cap. 142), to incorporate this Hospital, and investing in the Governor General the

appointment of two gentlemen from the town of Sorel, who, together with the Curé and the Church warden in office of the Parish of St. Pierre de Sorel for the time being, shall constitute the Board of Trustees. The duties of the Trustees are those of a board of general management, and it is their province "to constitute and appoint a medical staff to consist of not more than three licensed physicians and surgeons." We observe that the Governor General has already performed his duty, by the nomination to the trusteeship of J. G. Crebassa, Esq., the Mayor of Sorel, and G. F. Sincennes, Esq., under the Act. These we believe to be two excellent nominations, and as the Hospital is now organized in its board of management, we hope that nothing will frustrate the speedy erection of the building.

THE DESFORGES MURDER, AND THE FEE ALLOWED BY THE CANADIAN GOVERNMENT TO CHEMICAL EXPERTS.

About three years ago a murder was committed in the village of St. Jérôme, upon the wife of Joseph Desforges; the parties implicated, and who were afterwards hanged, having been Jean-Baptiste Desforges and a woman named Marie Crispin. Incertitude having existed as to the mode of death, the stomach and contents were delivered by the medical gentleman who performed the *post-mortem* examination to the coroner, for the purpose of a chemical examination. We have now to remark that on many previous occasions we had examined the stomachs, &c., of persons supposed to have been poisoned, and had never received what we considered a proper fee for such labour, the usual fee having been about £5, or £7 10s. It had been our custom on several antecedent occasions to decline the examinations for the reason stated. A medical gentleman, however, who supplemented ourselves on one declined occasion, received a fee at the rate of 2 guineas a day; and when we were waited on by the coroner in the Desforges case, we distinctly informed him, that we declined undertaking the investigation unless upon the same terms of remuneration which that gentleman had received. This was assented to on his part, and we accordingly undertook the analysis with Dr. Craik, whom *the coroner* associated with us. The examination lasted eleven days. We had no clue to any particular poison, and had therefore to make a qualitative examination for every known probable poison, whether of mineral or vegetable origin. The result was a negation of all poisoning, the truth of which was confirmed by the confession of Crispin herself. We need not remark that a negative examination of this nature is a far more difficult task, than the search for a particular poison known or suspected to have been administered. Our account amounted to twenty two guineas, which the Government has refused to pay; the sum offered by it being *fifty dollars*, which we, on the other hand, have refused to accept as an equivalent for our services rendered under the peculiar retainment before specified.

We give the above explanation to our esteemed contemporary, the American Medical Times, which has been kind enough to reply to our twice-put query to the American Medical Press to be informed of the fee paid for the chemical analysis of the stomach and contents in their respective cities. We desired to

be informed of these facts, which materially affect the value of the service rendered, previous to the adoption of measures to enforce, what we cannot but consider, a most righteous claim, for most important services, faithfully rendered.

We perfectly agree with our contemporary that there has always existed on the part of every government, a strong desire to place the services of scientific men, on the lowest possible scale of remuneration; and merely to say that this is a disgrace to it, is but giving an expression to our thoughts, in the mildest possible terms. And when we observe, that the government remunerates a lawyer at the rate £3, 15, per diem with his travelling expenses, and has been in the habit of employing non-professional men at the rate of £2 10s. per diem for their services on especial occasions, we have stated, we think, enough to show the light estimate which it puts upon a duty, than which none other can compare in the magnitude of its results.

We now subjoin the answer of our contemporary, and renew our request to our contemporaries in other cities for an expression of their opinion on the merits of the case submitted.

Your question is difficult to answer, because it is vaguely put; the amount of labor required is not stated. Was the analysis required to be made in search of one article known or suspected to be given, or was it made in search of *any* poisonous substance that may have been administered? Was the analysis a quantative one, or merely qualitative? For the minute and laborious investigation made by Professor Doremus in the Stevens case, we believe the fee paid was about $3,000, but in this case it will be recollected that two entire bodies were subjected to scrutinising investigation. In making these chemical analyses it should be borne in mind that the labor is not ended when the analysis is complete; there is the examination of the chemist before the Coroner's Jury, before the Grand Jury, and before the Criminal Court on the prisoners trial. There is the cross-questioning on that and many other irrelevant subjects, to try to show to the jury that the chemist is not perfect, that he does not know everything, and therefore his testimony is but of little value in the present case.

There is another and more important feature to be borne in mind. A fellow creature's life depends upon the skill, judgment, and honesty of the analyst; there can be here no mere suspicion, the poison must be positively shown to exist, not by one, but by all the known reagents; and if the quantity of poison is small, it must be shown that there is enough present to destroy life. We think for the amount of scientific skill, labor, and annoyance in the Stevens case, that Professor Doremuo was inadequately paid, and if the case to which our friend refers was of that nature, we think the charge should be equal. For the analysis of a stomach and its contents, with the intestines, when the search is for one article only, known or suspected to have been administered, the minimum charge should be $500, and larger in proportion to the labor and scientific skill required. When our fees more nearly approach those of our professional cousins. the lawyers, our skill and judgment will be more highly appreciated. —*American Medical Times.*

THE EMEUTE IN THE NEW YORK UNIVERSITY.

It is with anything but pleasurable feelings that we give insertion to the following extract from the *American Medical Gazette*, which is a very condensed statement of the occurences which have lately taken place in the New York University. We regret to say, that from all that we have read upon the subject, Professor Draper had too much cause to send to Dr. Aylette the letter which he

did, and that it would have better become the latter to have quietly pocketed the affront, if indeed it were one. There can be little doubt that Dr. Aylette has been for years past making a handsome percentage upon the cash of the Southern Students, and the wonder is to us that they could not take care of it themselves, or if they possessed more than they needed for present wants, that they did not deposit it in some solvent bank to their own order. The whole affair, originating out of a deepfelt interest in their welfare by Professor Draper, will we hope teach them a lesson which they will not soon forget.

The Medical Department of the New York University has for the last few days been the scene of some excitement, originating in a personal difficulty or misunderstanding between two of its Professors, of no especial interest to the rest of mankind, and which might better have been kept private, but which having been made public, demands a passing notice, if for no other reason than to correct the misrepresentation and exaggeration of the affair that have appeared in some of the City papers. It is in no sense a political difficulty, as has been made to appear by some sensation papers, nor is it true that fifty Southern students or even one-fourth of that number, are about to sail in the *Marion* to-day for the Sunny South in consequence of the affair.

The facts are simply these: Dr. Aylette, a Southerner by birth, but a graduate of the University, and for several years past a resident of this City, has for some years been connected with the Medical Department, not as a member of the Faculty, but as a private teacher, being allowed to sell tickets to the students for a private "quiz" of his own. This position he has held, not, as appears, from any especial talent he possessed as a medical teacher, but because from his Southern birth, connections and acquaintances, he was supposed to be able to influence Southern patronage, for which it is well known that the University Medical College particularly caters. It appears that during the present term, several Southern students who have deposited money with Dr. Aylette on their arrival in this City, had complained to Prof. Draper, the Dean of the faculty, as well as to other professors, that their deposits were returned to them in uncurrent funds, on which they had to pay a heavy discount, and in some cases they were unable to get any return at all. These complaints, however, it may be as well to state, were generally made as an excuse for not purchasing their tickets sooner than they did, as the regulations of the College require, or for paying for them in uncurrent funds. Prof. Draper accordingly wrote a note to Dr. Aylette, in which he requested an answer to several specific queries, based upon the above complaints. Dr. Aylette at once construed the letter as a personal insult, and instead of answering it, or waiting for mutual explanations, read it to his class, and accompanied by such comments as the state of his feelings suggested. His friends in the University called a public meeting, the letter was communicated to the newspapers in connection with the proceedings of the meeting, and thus the whole affair, which might, and should have been disposed of privately, became a matter of public notoriety. The unexpected publicity thus given to this subject, together with the denunciatory resolutions passed at a meeting of some of Dr. Aylette's friends, induced Professor Draper to resign his position as a member of the faculty. His colleagues declined to accept his resignation, and meantime his friends in the College had rallied to his defence, and have held meetings to consider the cause of the difficulty, and to decide what action is to take place in the premises. At the last meeting, held yesterday afternoon, Mr. Lawson, of Virginia, in the chair, the committee appointed at the previous meeting to investigate the facts, and to draft resolutions, reported that they were satisfied that Prof. Draper had sufficient proof in his possession to justify him in writing the letter he did to Dr. Aylette; at the same time they decline to express an opinion as to the truth of the charges implied in the questions propounded in the letter. They also express their undiminished confidence in the gentlemanly qualities of Prof. Draper, their high estimation of his ser-

vices in the College, and their earnest hope that he will reconsider his letter of resignation. The report of the Committee was embodied in a series of resolutions which were unanimously adopted.

Dr. Aylette also addressed the students yesterday morning, immediately after the 11 o'clock lecture, upon the difficulty that had arisen between him and Professor Draper; in which he admitted that the letter, written him by the latter, might have been indited from good motives and without intentional insult; at the same time he thought it very injudicious, and he denied *in toto* the charges implied therein. He also took occasion to say that neither he nor his friends, had been actuated in any degree by Southern feeling in the matter.

It is stated that Dr. Aylette will leave for the South to-day, and will be accompanied by about a dozen students. Some of his friends insist that his honour as a man is implicated in the implied charges against him, and that he ought not to leave until an investigation is had, and he is allowed to disprove them.

Nothing definite has transpired as to Prof. Draper's intentions, but there is little doubt that he will recall his resignation, and resume his place in the Faculty.

The letter from Professor Draper at which Dr. Aylette and the students have taken such umbrage, is as follows:—

Dr. Aylette:—Dear Sir,—Will you please give me replies for the use of the Faculty to the four following questions:—

1. Have you informed any student that it is not necessary to take out his tickets at the beginning of the session, and that the Faculty did not require their fees until Christmas?

2. Have you taken money from students who had brought it to New York for the purpose of paying their College fees, and invested it, for your own profit, with business men?

3. Have you, after receiving New York funds, given to any uncurrent notes a heavy discount, keeping the difference for your own use?

4. Have you failed to repay any student who had deposited his money for safe keeping, on the excuse that those to whom you lent it were unable to keep their engagements with you?

Your early reply to these questions will greatly oblige.

J. W. DRAPER,
President Medical Faculty, N. Y. U. M. C.

In conclusion of this affair the following letter was addressed by the Faculty of the University to Dr. Aylette:—

New York, Dec. 15, 1860.

Dr. A. P. Aylette—*Dear Sir*,—In view of the steps you have seen fit to take in the matter of the letter of interrogatories of Dr. John W. Draper, President of the Faculty of the University Medical College, the undersigned members of the said Faculty request that for the future all connection between yourself and the College be considered as dissolved.

Signed, John T. Metcalfe, Valentine Mott,
Alfred C. Post, G. S. Bedford,
W. H. Van Buren, Martyn Paine.

Since the above Dr. Aylette has left New York, with about half-a-dozen students, for Charleston, S. C.

THE BOTANICAL SOCIETY OF CANADA.

A meeting, called by public advertisement, was held in the Chemistry Class-Room of Queen's College, Kingston, on the 7th December, to consider the propriety of organizing a Botanical Society. A very large number of gentlemen

attended, and the Reverend Principal Leitch (Queen's College,) was called to the chair.

After an eloquent address by the Reverend Principal, Prof. Lawson, in an able and interesting speech, moved the first resolution, seconded by the Reverend Prof. Williamson—

"That this meeting resolve to form a Botanical Society;" after which the Reverend Professor Mowatt read to the meeting a draft of laws, which the promoters of the Society had framed for its organization, which was adopted upon motion of Dr. Dupuis, seconded by Dr. Yates.

This draft of laws specifies that the Society shall consist of four classes of members.—1, Honorary; 2, Fellows; 3, Annual Subscribers; 4, Corresponding Members, and enters into the particulars with regard to each class of members.

Prof. Lawson, seconded by Prof. Williamson, moved the appointment of a Committee to suggest office bearers for election at the next meeting, which was agreed to, the members being Principal Leitch, Professors Mowat, Williamson, Stewart and Lawson.

Professor Yates, seconded by Mr. Darrach, moved the appointment of a Committee to prepare rules for regulating the exchange of specimens, distribution of seeds, &c., which was adopted. The members to consist of Principal Leitch, Professors Yates, Williamson, Lawson and Dr. Duff, and finally a committee, consisting of Professors Williamson, Weir, Lawson and Dr. Dupuis, was nominated to consider the propriety of printing a catalogue of Canadian plants, and to facilitate exchanges.

Dr. Stuart moved the thanks of the meeting to the Principal for his conduct in the chair, and the meeting adjourned to the laboratory of the College, where tea was served, and the members had an opportunity of seeing and examining botanical specimens, microscopic objects, and rare books on botanical science.

The next meeting of the Society will be held on the 11th of June, for the election of officers, and scientific papers will be read by Professors Blackie and Lawson, Dr. Dupuis, Dr. Lindsay and others.

It is our most sincere wish, that a Society inaugurated with so much zeal and earnestness, will exhibit no flagging in its future operations.

LICENTIATES OF THE MEDICAL BOARD OF UPPER CANADA SINCE THE YEAR 1849.

Continued from the old series of the British American Journal, Vol. 6, page 91.

Hans Caulfield, M. D.,	January 12,	1850
Abner Otis Kellogg,	January 12,	1850
Joshua McLean,	January 12,	1850
William Bell,	January 19,	1850
John McMahon,	April 6,	1850
James Might,	April 13,	1850
Robert Petch,	April 13,	1850
John Orange Baker,	April 13,	1850
Joseph Andrew Neilson, M. R. C. S.,	May 11,	1850
Peter McKenzie,	May 11,	1850
Daniel Wilson,	May 11,	1850
Roderick Kennedy, M. D., and M. R. C. S. E.,	June 15,	1850

John Wilson Wood,.....June 15, 1850
John Howitt,.....July 6, 1850
Christopher W. Flock,.....July 13, 1850
Orlando Strange,.....July 13, 1850
Norman Bethune, M. D., M. R. C. S. L.,.....November 2, 1850
George Ryall, M. D.,.....November 16, 1850
Eugene Finn, M. R. C. S. E.,.....November 30, 1850
Michael Balfe, M. R. C. S. E.,.....December 14, 1850
Amos McCrae,.....January 11, 1851
Hart Proudfoot,.....January 11, 1851
Charles Gardner,.....January 11, 1851
Robert Gibbings,.....January 11, 1851
Samuel Miller,.....January 11, 1851
David Dulmadge Wright,.....January 25, 1851
William Henry Evatt,.....February 15, 1851
Thomas Clark,.....April 12, 1851
William Henry Harvey,.....April 12, 1851
Ezra Foote,.....April 12, 1851
Theodore Hopkins,.....April 12, 1851
Matthew F. Haney,.....April 12, 1851
Alexander H. Stephen,.....April 12, 1851
James Hackett,.....April 12, 1851
John Hyndman,.....April 12, 1851
John S. Morrison,.....April 19, 1851
Charles Septimus Eastwood, M. D.,.....May 24, 1851
William Cameron Chewett, M. D.,.....May 31, 1851
John James Mason, M. R. C. S. E.,.....June 21, 1851
John Smith, M. R. C. S. E.,.....July 5, 1851
Humphrey Desmond,.....July 12, 1851
Walter Bayne Geikie,.....July 12, 1851
James Ross,.....July 12, 1851
Joshua Fidler,.....July 12, 1851
Lorenzo Closson,.....July 19, 1851
Alexander Kerr Nelson, M. R. C. S. E.,.....August 9, 1851
John Thomas Small, M. D., M. R. C. S. E.,.....August 23, 1851
John Young Bown, M. D., M. R. C. S. E.,.....August 23, 1851
John Robert McCullough,.....October 25, 1851
George Paton,.....October 25, 1851
David Tucker, M. B.,.....October 25, 1851
Henry William Cole, M. B.,.....November 12, 1851
Joseph Carbert,.....January 16, 1852
Robert A. Haney,.....January 16, 1852
William Potter,.....January 31, 1852
Robert Henry Swyny,.....February 28, 1852
Hickman Rose Daniell,.....February 28, 1852
George D. Morton,.....April 17, 1852
George Gillespie,.....April 17 1852
John B. Lundy,.....April 23, 1852
George Duncan,.....April 23, 1852
Robert H. Dee,.....April 23, 1852
George Couse,.....May 1, 1852
Hotchkins Haynes,.....July 16, 1852
Solomon W. Davison,.....July 24, 1852
Jeremiah W. Sovereign,.....July 24, 1852
David S. Bowlby,.....July 24, 1852
Thomas Beatty,.....July 31, 1852
James Carroll,.....August 14, 1852
James Stephens,.....October 9, 1852
Joseph Rosebrugh,.....October 16, 1852
John W. Morris,.....October 16, 1852
Hartly Samuel Laycock,.....October 16, 1852
Michael Barrett, B. A.,.....October 23, 1852
Thomas Jerome Orton,.....October 23, 1852

(To be continued.)

EDITORIAL SUMMARY.

Death from Hydrophobia.—The Paris (Canada West) *Star* has an account of the deaths from hydrophobia, of Mr. George Clark of Blenheim, and one of his children. It appears that in the month of July last, he, with one of his children and two others, were bitten by a dog belonging to him, which had gone mad. No bad symptoms were developed till about six weeks ago, when the child, which was about six years of age, died evidently of hydrophobia. On the morning of Monday the 3rd inst., Mr. George Clark found that on going to the well he had an unaccountable dread of water. He mentioned the circumstance to his brother, and without delay a German physician was sent for. By the time he arrived, Mr. Clark was in convulsions; these continued at intervals, increasing in duration and violence until the following night, when death put an end to his sufferings. The other two who were bitten have as yet shown no symptoms of being affected.

Rapid horse racing and endurance of fatigue.—The Santa Clara (Cal.) race course was the scene of a remarkable trial of equine speed and human endurance on the first of November last. J. R. Pico, of St. Jose, made a wager of $25,000 that he would, on the day above named, ride 150 miles in the brief period of six hours and thirty minutes, or at the railroad speed of more than twenty-three miles per hour, not allowing the time lost in mounting and dismounting the different horses which he proposed to use. He won the bet, with fourteen minutes and ten seconds to spare.

If this be correct and we see little reason for doubting it, it deserves to be placed on record with Osbaldistone's feat, who rode 1,000 miles in 1,000 hours; the feat of the latter, who also won his wager, indicated to our mind, a far greater endurance of fatigue.

The Pleuro-pneumonia among Cattle.—The excitement consequent upon the developments of this disease in different sections of New England, has long since subsided, and the fears that with the returns of winter, and the necessary stabling of cattle in the infected districts, the malady would re-appear, have, thanks to the prompt and efficient action of the State Commissioners, been allayed. No new cases have been reported, and the old ones are fast diminishing. The occupants of the "hospital pasture" at North Brookfield, Massachusetts, numbering from ten to fifteen head of cattle, the remnants of numerous herds which were nearly exterminated last summer, were examined by the Commissioners about two weeks since, and the disease having proved incurable, the cattle were all slaughtered. The opinion prevails among the Commissioners that the disease will not again make its appearance, although cattle have not yet been so closely confined as they will necessarily be after the weather becomes colder.—*Montreal Advertiser.*

University of Edinburgh.—The number of matriculated students is this year larger than for several years past, the increase being chiefly in the Faculty of Medicine. Up to Monday, November 26, the entrances were as follow: 538 Medical, 624 Literary, and 228 Law Students, in all 1390. At the corresponding date of last year, the total number of matriculations was 1348.

Appointment.—Dr. G. B. H. Macleod has been elected Professor of Surgery in the Andersonian University, Glasgow.

A Portrait of Dr. Sampson.—The City Council chamber is to be enriched by an additon to the Mayoral visages which decorate its walls in the portrait of Dr. Sampson which has been lately executed by Mr. Sawyer. The excellence of the likeness is generally admitted, and is a beautiful illustration of the adaptability of the chemico-mechanical processes of photography to further the purposes of art. The portrait is in oil, life size, for which Dr. Sampson consented to sit at the request of a few old personal friends, who were desirous of preserving some memorial of one who during forty years has rendered many important professional and public services to Kingston for its inhabitants. The portrait is a gift to the city.—*British Whig.*

Christmas at the Lunatic Asylum, Toronto.—About noon on last Christmas day, all the patients, except the "worst ones," sat down to an excellent dinner of the usual Christmas cheer. The Medical Superintendent was most solicitous in contributing to the comfort and happiness of the guests. In the afternoon a couple of hours were spent in singing and instrumental music, and on the whole the entertainment is stated to have been most agreeable. At the Branch establishment, a like entertainment was afforded to the patients.

Splendid Donation.—We learn from the *American Medical Times*, that Prof. Torrey, the celebrated botanist, has made a donation to Columbia College, New York, of his large herbarium, probably one of the most complete in the world, containing specimens of the Flora of America, Europe, Asia, Cape of Good Hope, Australia, and many other places. Dr. Torrey does not intend to relinquish his favourite pursuit, but the Trustees have given him a residence in the College building, with every facility for further investigation. The herbarium which was given to the college, was the fruit of forty years' labour. Prof. Torrey is the author of several well known works on Botany.

BIRTHS, MARRIAGES, AND DEATHS.

Birth.

At Tullamore, C. W., on the 15th December, the wife of John T. Mullin, M.D., of a daughter.

Marriages.

In Toronto, on the 26th December, by the Rev. A. Topp, John L. Stevenson, M.D., of London, C. W., to Kate, second daughter of the late Joseph Blain, Esq., of Montreal.

In St. Thomas, C. W., on the 27th ultimo, at the residence of the bride's father, by the Rev. Dr. Caulfield, George Fitzsimons, Esq., M. D., of Egmondville, to Miss Mary Jane Rhycard, of St. Thomas.

Deaths.

In Dublin, on December 1st, suddenly at his residence, Merrion Square, North, Sir Henry Marsh, Bart., Physician in Ordinary to the Queen in Ireland.

Of the various Dublin practitioners none attained a higher position than Sir Henry, a position which he held up to the period of his decease. This occurred very suddenly. About 9 a. m. he was attacked by giddiness and fell fracturing one of the bones of his leg. Professional assistance was immediately obtained, and he had so far recovered as to be enabled to tell the circumstances which had transpired. Unconsciousness however, gradually supervened, and he died at twenty minutes to one o'clock, P. M. Sir Henry's parents, were originally of English descent. His father was the Reverend Robert Marsh, rector of Killinane, County of Galway. He was in early youth brought up to agricultural pursuits, but an accidental meeting with a near relation changed his plans and he entered upon the study of medicine. He selected Surgery as his especial branch, until a dissection wound caused the loss of a portion of his right forefinger, after which he devoted himself to the practice of medicine. Few have done more, by his lectures and his example, to elevate the Dublin School of Medicine to its present elevated condition.

At Guernsey, on November 23, Dr. Halahan, Inspector General of Hospitals, late Royal Artillery.

In Dublin, on 26th Nov., Mr. Thomas Johnston Atkinson, Surgeon 31st Regiment.

In Corunna, Michigan, on the 27th November, of Typhoid fever, Dr. Robert Duncan, aged 34 years, fourth son of Mr. William Duncan, Granby, E. T.

At Sorel, on the 14th Dec., A. R. Pantaleon, infant son of Dr. P. Cadieux, aged 2 years.

At Truxillo, in the Province of Honduras, on September 20th, William McCombie, Esq., Assistant Surgeon on board H. M. (S.S.) *Icarus*, in the 24th year of his age.

At Quebec, on the 21st December, after a long and protracted illness, Dr. Joseph Lizotte, aged 59 years.

At Freligsburgh, C. E., on the 28th December, Bates Cooke, eldest son of the late S. P. Barnum, M. D., aged 19 years. This estimable young man began the study of medicine by attending, at McGill College, the session of 1858-59. Attacked by acute articular rheumatism, his heart suffered from Pericarditis by metastasis, and he succumbed after two years of suffering.

At his residence, North Cayuga, on the 23d ult., Dr. James Mitchell, in the 68th year of his age.

ABSTRACT OF METEOROLOGICAL OBSERVATIONS AT *MONTREAL* IN DECEMBER, 1860.

By Archibald Hall, M.D.

Day.	DAILY MEANS OF THE: Barometer corrected and reduced to P. 32°	Temperature of the Air.	Dew Point.	Relative Humidity.	Ozone.	CLOUDS: Amount.	CLOUDS: General description	THERMOMETER: Maximum read at 2, P.M.	THERMOMETER: Minimum read at 7, A.M.	WIND: Its general Direction and Mean Force from 0 Calm to 10 Violent Hurricane.	RAIN AND SNOW: Rain in 24 h'rs read at 10, A.M.	RAIN AND SNOW: Total rain and melted snow	RAIN AND SNOW: Snow in 24 h'rs read at 10 A.M.	GENERAL OBSERVATIONS.
	Inc's	°	°	0, 100	0, 10	0, 10		°	°	0, 10	Inch.	Inch.	Inch.	
1	29.265	22.2	24.9	.90	9.0	10.0	Nimb.	35.0	23.3	W.N.W. 3.3	Inap.	Inap.	0.17	
2	29.361	26.1	22.3	.77	7.0	10.0	Cu. St.	29.4	20.0	W. 4.3	.....	2.00	0.24	
3	29.173	30.1	25.2	.85	8.0	10.0	Cu. St.	34.5	26.2	W. 2.0	.....	0.30	0.03	
4	29.263	23.0	18.2	.80	7.0	9.3	Cu. St.	31.4	23.2	N.N.E. 2.0	.....	.....	.....	
5	29.317	23.2	15.8	.68	6.0	10.0	Cu. St.	27.0	20.2	N. 2.0	.....	Inap.	Inap.	
6	29.336	20.1	12.4	.84	5.3	10.0	Cu. St.	25.3	17.0	N.N.E. 2.0	.....	Inap.	Inap.	
7	29.936	19.1	10.7	.84	4.3	10.0	Cu. St.	22.2	15.0	N.N.E. 1.3	.....	.....	.....	
8	30.185	18.2	9.9	.84	4.3	9.3	Cu. St.	21.0	14.3	N.N.E. 1.3	.....	.....	.....	
9	30.150	22.5	8.1	.72	3.3	1.3	Cu. St.	25.4	12.3	W. 2.0	.....	0.40	0.07	
10	29.863	21.5	12.7	.77	5.0	8.0	Nimb.	24.3	15.2	N. 2.3	.....	Inap.	Inap.	Light Fog early a.m.
11	29.672	16.3	6.7	.72	3.3	7.3	Cu. St.	23.8	10.2	W.N.W. 1.0	.....	4.30	0.43	
12	29.482	19.2	10.6	.84	4.5	10.0	Cu. St.	22.8	6.2	S.S.W. 2.0	.....	Inap.	Inap.	
13	29.647	12.0	3.3	.76	4.2	4.3	Cu.	23.0	4.2	W. 3.3	.....	2.00	0.09	Bright Zod. light.
14	30.232	— 1.7	—11.2	.65	1.5	0.1	Strat.	5.8	— 7.3	W. 3.0	.....	.....	.....	Bright Zod. lt. Last steamer
15	30.302	— 0.2	— 8.8	.70	3.0	10.0	Cu. St.	2.7	— 7.2	E.S.E. 2.6	.....	.....	.....	left for winter quarters.
16	30.140	12.7	5.1	.84	5.0	8.0	Cu. St.	26.4	— 5.2	W.S.W. 1.0	.....	.....	.....	
17	30.422	11.4	4.0	.79	2.7	7.0	Cir. St.	21.4	6.3	W.N.W. 1.0	.....	.....	.....	
18	30.672	2.0	— 6.3	.74	1.3	0.0	0.0	4.0	— 2.2	N.E. 2.3	.....	.....	.....	
19	30.212	11.1	4.3	.83	3.8	7.3	Nimb.	23.3	— 3.3	E.N.E. 3.3	.....	.....	.....	
20	29.267	33.0	31.2	.98	10.0	10.0	Nimb.	35.3	23.3	E.N.E. 1.0	0.93	2.50	1.29	
21	29.644	23.2	15.1	.71	5.5	8.3	Cu. St.	33.2	18.0	W.S.W. 2.3	0.35	1.25	0.51	
22	29.645	24.0	20.3	.87	9.0	10.0	Nimb.	33.4	15.2	N.N.E. 2.6	.....	2.75	0.27	
23	30.092	10.9	1.6	.70	4.0	0.3	Strat.	22.0	6.2	W. 1.6	.....	1.75	0.22	
24	30.121	12.5	3.3	.66	2.5	2.0	Cir. St.	18.3	4.2	W.N.W. 2.6	.....	.....	.....	
25	30.091	18.2	5.5	.58	3.5	9.6	Cu. St.	23.3	10.2	W.N.W. 0.6	.....	.....	.....	
26	30.235	26.5	19.3	.75	5.0	10.0	Cu. St.	32.6	18.2	W. 1.0	.....	Inap.	Inap.	
27	30.462	21.9	13.2	.70	6.5	10.0	Cu. St.	25.5	18.2	W. 1.0	.....	.....	.....	
28	30.599	22.2	15.3	.71	4.7	10.0	Cu. St.	25.0	19.6	N.N.E. 1.3	Inap.	.....	Inap.	
29	30.455	20.8	12.2	.71	7.5	10.0	Cu. St.	23.3	15.4	E.N.E. 2.0	.....	.....	.....	
30	30.238	31.2	29.0	.91	9.5	10.0	Nimb.	33.3	18.7	S.S.W. 3.3	.....	0.64	0.04	
31	30.301	21.8	12.4	.70	5.5	7.0	Cu. St.	33.3	18.8	W. 2.6	.....	2.60	0.16	
S's	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.30	20.69	3.37	
M's	29.997	19.21	11.21	.793	.....	.....	.....	24.95	12.18	.....	.....	.....	.....	

ABSTRACT OF METEOROLOGICAL OBSERVATIONS AT *TORONTO* IN DECEMBER, 1860.

Compiled from the Records of the Magnetic Observatory.

Day.	DAILY MEANS OF THE: Barometer reduced to 32° Fah.	Temperature of the Air.	Relative Humidity.	Amount of Cloudiness.	THERMOMETER: Max'm read at 6, A.M. of next day.	THERMOMETER: Min'm read at 2, P.M. of same day.	Dew Point at 3, P.M.	WIND: General Direction.	WIND: Mean Velocity in Miles per hour.	RAIN AND SNOW in 24 hours, ending at 6 A.M. next day: Rain.	Snow.	Total rain and melted Snow.	Ozone in 24 hours ending 6 A.M. of next day.	GENERAL REMARKS.
	Inches.	°	0—100	0—10	°	°	°			Inch.	Inch.	Inch.		
1	29.2417	23.28	81	10	25.2	21.2	21.0	N. 33 W.	20.73	.....	0.1	0.010		
2	.....	Sunday			30.8	21.8	.....	N.N.W. 75 W.	14.79	.....	Inap.	Inap.		
3	.5747	31.32	88	10	31.0	28.6	28.8	N.N.W. 78 W.	6.76	.....	Inap.	Inap.		
4	.4878	28.38	87	10	31.8	28.8	26.9	N. 6 W.	7.89	.....	0.1	0.100		
5	.4017	23.70	90	9	30.0	21.9	20.0	N. 53 W.	6.35	.....	Inap.	Inap.		
6	.3075	26.25	90	8	30.4	23.0	25.0	S. 44 W.	6.36	.....	1.0	.100		
7	.5738	30.32	83	5	36.0	23.7	25.0	N. 31 W.	8.53	.....	.....	.....		
8	.8517	24.92	87	8	30.0	24.0	25.0	N. 1 W.	5.83	.....	.....	.....		
9	.....	Sunday			35.2	24.2	.....	S. 68 W.	5.56	.....	1.5	.150		
10	.2387	31.20	94	10	34.2	31.4	32.0	N. 20 W.	9.57	.....	4.5	.450		
11	.5007	20.75	74	7	29.0	19.5	7.0	S. 82 W.	14.18	.....	Inap.	Inap.		Faint Aurora.
12	.1737	25.20	79	8	28.0	15.0	19.0	S. 60 W.	10.04	.....	0.2	.020		Auroral light 6 a.m.
13	.5805	11.25	84	1	17.6	13.5	3.5	N.N.W. 68 W.	12.75	.....	0.1	.010		
14	30.1893	1.08	79	2	9.0	—7.0	—2.0	N. 8 W.	5.63	.....	0.2	.020		
15	29.9892	13.20	78	6	24.0	1.3	10.0	N. 56 E.	6.18	.....	.....	.....		
16	.....	Sunday			34.5	11.0	.....	S. 60 W.	8.52	.....	.....	.....		Auroral arch and streamers.
17	30.0488	23.28	81	10	26.0	21.4	17.5	N. 28 E.	7.80	.....	Inap.	Inap.		
18	30.0290	24.92	87	10	33.8	19.0	19.5	N. 75 E.	17.70	.....	0.5	.050		
19	29.4345	35.45	93	10	37.8	23.5	35.0	S. 84 E.	8.98	1.205	.....	1.205		
20	28.9273	37.05	80	10	39.0	35.2	31.5	S. 89 W.	13.23	.047	.....	.047		Dense fog during forenoon.
21	29.2355	28.27	87	9	31.2	27.5	32.0	N. 9 W.	10.17	.....	5.0	.500		
22	.4902	21.15	82	9	25.8	21.4	18.5	N. 86 W.	10.48	.....	Inap.	Inap.		
23	.....	Sunday			22.5	10.4	.....	N. 82 W.	5.59	.....	.....	.....		
24	.9605	18.30	84	8	24.4	13.8	38.5	N. 61 W.	7.12	.....	.....	.....		Lunar Halo.
25	.....	Christmas			23.7	15.4	.....	N. 16 W.	9.74	.....	Inap.	Inap.		
26	30.0577	23.88	86	9	28.0	19.0	19.5	N. 43 W.	10.27	.....	Inap.	Inap.		Solar Halo.
27	30.1888	25.88	86	10	28.8	23.5	25.0	N. 37 W.	8.28	.....	.....	.....		
28	30.1697	21.70	86	10	28.0	18.0	21.5	N. 66 E.	10.64	.....	.....	.....		
29	29.8797	31.03	76	10	34.2	18.2	20.0	S. 20 E.	13.64	.050	0.2	.070		
30	.....	Sunday			25.0	16.0	.....	S. 73 W.	11.01	.....	Inap.	Inap.		Solar Halo.
31	30.0617	17.82	79	8	25.5	15.0	10.0	S. 66 W.	11.05	.....	0.1	.010		
S's	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.302	13.5	2.712		
M's	29.6666	24.01	84	8	28.79	19.25	20.20	N. 62° W.	10.14	.....	.....	.....		