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THE

BRITISH AMERICAN JOURNAL

OF

MEDICAL AND PHYSICAL SCIENCE.

VOL. I.] MONTREAL, AUGUST, 1845. [No. 4

METEOROLOGICAL OBSERVATIONS.

To the Editors of the British American Journal.

GENTLEMEN,—In continuation of the meteorological observations transmitted to you for publication on previous occasions, I send you herewith a series of general results of the quantity of snow fallen during the six winters specified in the tables, compiled by myself from registers kept by Wm. Belin, Esq., M.D., Long Point, about four miles from town. I send you, also, a table indicative of the mean temperature at Fort Colonge, on the Ottawa River, C. E.

I remain, yours very truly,

J. S. McCORD.

Table of the Quantity of Snow fallen, in inches, on the Island of Montreal, compiled from Registers kept by William Belin, Esq., M.D., at Long Point, near Montreal, by J. S. McCord.

Winter of 1830-31.				Winter of 1831-32.				Winter of 1832-33.			
Month	Day	Inch.	Tot'l	Month	Day	Inch	Tot'l	Mon.	Day	Inch	Tot.
Nov..	—	2,80		Nov..	22-23	1,75		Nov..	5-6	1,20	
	25-26	,30			27-28	2,80			13-14	,40	
			3,10		28-29	,10			22-23	1,00	
Dec...	9	8,70					4,65		24-25	2,70	
	15-16	,30		Dec...	4-5	3,50			26	,50	
	18-19	3,20			9	,10			30	2,00	
	20	5,30			11-12	,75					7,80
	27-28	6,10			13	1,00		Dec..	1	1,00	
	28-29	,80			15	,10			4-5	,50	
	30-31	2,10			16	,75			6	,60	
			26,50		17	,80			8	2,00	
Jan'y.	3-4	,50			19	,75			17	7,30	
	5	,40			20-21	4,20			18-19	1,40	
	11	2,00			24	6,20			27	2,80	
	18	1,70			26-27	1,50					15,60
	22	,90			28-29	6,80		Jan'y	2-3	,10	
	23-24	,80			29	1,00			10	,10	
	26-27	,60					27,45		11-12	,20	
			6,90	Jan'y.	31-1	1,10			13-14	2,10	
Feb'y.	3-4	13,50			2-3	,80			15-17	10,50	
	11	,50			5-6	5,10			17-18	,60	
	12	,30			9	2,50			27-28	,90	
	19	1,80			25	4,10			30	1,00	
	22	,20			20	,50					15-50
	23	7,00			30	7,20		Feb'y	6-7	3,20	
			23,30				21,30		9-10	1,70	
March	7	1,00		Feb'y.	2	4,50			12-13	3,30	
	9	,90			6-7	1,00			22	3,50	
	13	1,00			9-10	2,00			27	2,75	
	19	8,20			12-13	2,10					14,45
	27-28	,90			14-15	1,90		Mar.	1-2	2,00	
			12,00		17-18	5,28			5-6	,55	
April..	7	,10			19	3,30			8	,70	
	8	,20			20-21	,60			12	2,30	
	10-11	1,30			22-23	3,60			15	1,60	
			1,60		25-26	,35					7,15
May..	9-10	,50			28-29	1,25					
			,50				25,85				
				March	4-5	3,30					
					5-6	6,00					
					17-18	9,00					
					20-21	1,80					
					26	1,25					
							21,35				
				April..	4	,50					
					16-17	6,50	7,00				
Total in the year			73,90	Total in the year			107,60	Total in the year			60,50

Winter of 1833-34.				Winter of 1834-35.				Winter of 1835-36.			
Mon.	Day.	Inch	Tot.	Mon.	Day.	Inch	Tot.	Mon.	Day.	Inch	Tot.
Oct..	28-29	,40		Oct..	26	1,00		Oct..	31	,10	
	31	,20			27-8-9	,60					,10
			,60				1,60	Nov	6-7	,10	
Nov	17-18	1,80		Nov	19-20	,20			11-12	,75	
	22	1,50			22-3-4	2,35			23-24-'5	6,60	
	29	,05			21-5-6	,40			28	1,50	
			3,35				2,95				
Dec..	9-10	8,00		Dec..	1-2-3	1,50		Dec..	1	,50	
	22	1,00			6	7,50			4-5	6,35	
	24	10,00			8	2,00			9	,80	
	29	2,40			11	3,10			14	1,70	
	30-31	,50			13	2,50			19-20	,85	
			21,90		15-16	2,85			24-25	,40	
Jan'y	2	4,00			18-'9-20	2,85			29-30	2,90	
	11-12	2,00			22-'3-'4	3,65					11,95
	19	,05			30-31	1,75		Jan'y	1	,30	
	20	,50					27,70		4	1,00	
	26	4,25		Jan'y	2	1,00			6	2,30	
	28	1,00			16	,25			11	,50	
			11,80		20-'1-'2	8,60			18	4,20	
Feb'y	14-15	,60			22-'3	1,00			21-22	3,50	
	25	2,00			28	1,00			25-26	3,65	
	26-27	,50					11,85		28	,25	
	28	,30		Feb'y	29—1	2,50			29-31	2,50	
			3,40		1-2	,25					18,20
Mar.	1-2	2,40			7-8	5,00		Feb'y	8	9,00	
	6-7	1,75			11-'2-'3	2,25			10-13	,80	
	16-17	1,50			15-'6-'7	3,05			13	1,30	
	20	,50			17-'8-'9	7,80			25	6,00	
	25-26	1,50			20-21	1,00			27-'8-'9	2,25	
	27-28	,30					21,80				19,35
	29	2,00		Mar.	2	,25		Mar.	2-3	,75	
			9,95		7-8-9 10	2,10			4-5	1,50	
					16-17	3,50			13-14	6,80	
					19	3,35			17	4,75	
					21	2,00			22-23	1,35	
					22-23	4,00			28-29	0,25	
					20	1,20					14,40
					22	,80		April	10	2,00	
					24	,85			13-14	5,60	
					26	1,00			22-23	,85	
							19,05				
								May	13	,50	8,45
											,50
Total in the year			51,00	Total in the year..			84,95	Total in the year..			86,35

Making in the six years a total of 464.40 inches, or an average of 77.40 for each year.

Table of Mean Temperature at Fort Colonge, Ottawa River, Lower Canada, Lat. 45 deg. 50 min. 10 sec. N., Long. 76 deg. 55 min. W., calculated and compiled from Tables kept by John Siveright, Esq., of the Hon. Hudson's Bay Company, and by him presented to the Natural History Society, Montreal, by J. S. McCord.

	1824	1825	1826	1827	1828	1829	1830	1831	
January	14,40	15,00	13,80	9,90	13,07	11,05	6,03	7,40	
Feb'ry	14,40	19,40	15,50	16,00	21,00	11,90	13,70	14,00	Mean of three daily
March	28,60	32,10	26,30	29,40	29,38	25,80	27,60	32,70	observations made
April	42,90	43,10	36,20	42,90	38,96	40,60	38,50	41,30	at sunrise, noon,
May	54,80	54,90	50,91	50,38	56,40	59,50	51,90	55,60	and sunset.
June	65,10	67,00	66,40	63,90	67,70	63,70	60,40	69,00	
July	68,30	71,80	68,10	69,30	66,60	75,20	67,90	68,00	
August	63,80	67,40	68,00	63,60	69,10	66,60	63,60	69,60	
Septem.	57,10	53,40	56,70	53,10	58,90	57,50	53,40	55,10	
October	42,00	44,80	43,70	44,90	44,70	47,50	46,90	45,80	
Novem.	27,80	31,80	30,40	25,60	33,10	29,60	49,00	32,10	
Decem.	19,70	16,00	14,70	14,20	18,60	25,40	22,50	5,00	
Means	41,68	43,05	41,57	40,88	43,08	42,90	41,05	41,30	Mean of the 8 years 41,926.

Maximum and minimum temperature.

Max.	..	x89	x99	x91	x96	x90	x96	x96	Mean of warmest days..x95,142
Min.	-42	-34	-13	-37	-29	-33	-32	-31	Mean of coldest days..-35,120

ON THE ANALYSIS OF THE TUSCARORA SOUR SPRING, NEAR BRANDTFORD, C. W.

To the Editors of the British American Journal.

I have this morning received your journal, (Vol. ii. No. 2,) in which you have been kind enough to publish my rough notes on the Tuscarora Spring, and in which you state, that M. De Rottermund has announced the presence of antimony in the same spring water.

This, if true, would be a most astonishing discovery, for I cannot remember that this metal has *ever* been noticed in any spring. Rose and Berzelius certainly do not mention it, nor do I think there is any notice of it in the treatises of Daubeny, Bischoff and Osann. I was so struck with the announcement, that I instantly made an experiment with some of the waters in my possession.

A current of sulphuretted hydrogen was passed through four ounces of the water for a quarter of an hour: a considerable milkiness was produced, arising from the decomposition of the sulphuretted hydrogen by the sesquioxide of iron, which I have shown to exist in the water; the opacity or milkiness is produced by precipitating *sulphur*. Not a trace of any orange coloured precipitate could be observed.

As a proof of the delicacy of the test by sulphuretted hydrogen, I took a quantity of tartar emetic, less than half a grain, (the oxide of antimony must therefore have been less than one-fourth of a grain), this was dissolved in four ounces of water, a little sulphuric acid added, and the solution treated with sulphuretted hydrogen. *A dense orange coloured precipitate* was *immediately* formed.

I have no hesitation in saying that there is no antimony in the water that I have examined, and although I hear there are several springs differing considerably in their properties, I very much doubt whether that metal will be found in any one of them.

Yours very truly,

HENRY CROFT.

King's College, Toronto, June 12, 1846.

[Professor Croft will excuse the non-appearance of his letter in the previous number. It arose in consequence of the *original department* of that number having been set up before its reception.]

POISONED CONFECTIONERY.

BY DR. VON IFFLAND.

Several years since, I invited the attention of the educated portion of the Province, to the flagrant impositions so frequently practised upon the credulous, by the proprietors, agents, and vendors of Patent, but more generally and properly called, *Quack Medicines*: to many of which, were then, as now, ascribed curative properties to every disease and accident, incidental to suffering humanity, but, which results shewed, were fraught in their administration, with the most serious and dangerous consequences.

These expositions, although submitted in the cause of reason and science, and strengthened, as well by the purest and most beneficent considerations, as by the justice and candour of those possessing public confidence, were deemed too bold and intrusive by *the interested* to escape the keenest reproaches, malevolence and personal abuse. It cannot, therefore, but be with some apprehension, that I approach a subject, whose importance most sensibly interests the whole human family, while it also involves the speculative gains of an industrious class of citizens, but who, too often, in pampering the luxurious palates and tables of customers, become the cause (sometimes innocent) of much serious evil, from the various metallic poisons in their preparations of confectionery.

Having had occasion to visit Montreal sometime since, my attention was directed to the variegated and attractive colors of numerous specimens of confectionery, tastefully displayed not only in splendid shops, but also exhibited for sale by smaller retailers in the public markets; but sweets always seductive to the child and youthful branch of the community, are rendered more particularly so, from their beauty of color and fantastic shapes, and never fail to incite cravings, which the indulgent parent, not aware of their pernicious properties, too readily gratifies. From these considerations, the demand naturally keeps pace with the cupidity of the manufacturers, who, unscrupulous of the means employed, seldom feels anxiety or apprehension for consequences.

Conscious then of honestly obeying a strong impulse of public duty, I had written thus far; but, with a view of ascertaining, whether an application to a matter of so much importance, might not already have been brought to view by others, whose position and circumstances offered more favorable opportunities of investigation, I searched numerous works of authority and popular periodicals, and I am gratified to discover the publication of Dr. W. O'Shaughnessy, of such distinguished talent, that I cannot better meet the intentions with which I set out, than by submitting extracts from that gentleman's article on Poisoned Confectionery, and although it appeared fourteen years since, may not probably be generally known to the junior members of the profession.

He has evidently taken a deep interest in the subject, devoted to it much time and labor, and pursued the inquiry with all the calmness and caution which its importance required, and I am fully convinced, that the facts he has established, afford irresistible evidence of the deleterious properties of several preparations of confectionery.

Mr. Chevallier, in a recent article in the *Journal de Chimie*, tome vi. p. 608, commences by observing that at several times he had related in the *Journal de Chimie*, various accidents produced by the consumption of sugar confectionery, colored by mineral poisons—of these he particularizes the *schweinfurt green*, a compound of arsenious acid (arsenic) and copper, the *chromate of lead*, and the *sulphuret of mercury*.—Lastly; he enumerates *Gamboge*, a drastic purgative, and consequently an active irritant poison. Despite of the notification of this dangerous practice, made in nearly all the journals, literary, political, and medical, this mode of coloring was persevered in, till at length the Council of Health was consulted on the subject. This body lost no time in investigating it as it deserved, and the result was, an ordinance of police for the suppression of the nuisance. —The following document, which led to the ordinance, is well worth attention:—

Report addressed by Mr. Andral to the Prefect of Police, on the dangers which may result from the use of colored sugar confectionery.

"M. le Prefect, you have instructed the Council of Health to report to you, on the danger which may result from the consumption of colored confectionery, and on the measures necessary to be adopted to prevent the manufacture and sale of any such pernicious articles. The delegates of the Council have the honor to submit to you the following propositions:—

"1. It will be important to specify in the ordinance, what are the coloring substances which should be prohibited. These are, in the first place, all those derived from the mineral kingdom, except the oxides of iron, ferrugineous lakes, or Prussian blue, all of which may be safely employed. Of vegetable substances *gamboge* should be severely proscribed, as being a drastic cathartic, which even in minute doses, necessarily occasions violent intestinal irritation. *Litmus* should be equally prohibited, as well on account of its being occasionally incorporated with putrified urine,—as that some manufacturers mix it with common *arsenic* and the peroxide of *mercury*.

Observation.

"The most diversified colors may be obtained by the confectioners from totally harmless compounds. Thus from the lakes of cochineal and carmine, they can prepare all the reds; the lakes of logwood will afford them the violet; the lakes of dyer's broom (*genista tinctoria*) will give the yellow, the lakes of Persian grain (*polygonum Persicaria*), with Prussian blue, forms a more beautiful green than any mineral can produce; finally, by the mixture of these harmless colors all the intermediate tints and shades will be obtained.

"2. The papers used for wrapping up sugar confectionery should also be strictly attended to, since they are colored with the same poisonous materials, and *children will invariably suck or eat these papers*, from which it is evident the most fatal accidents may occur. *A member of the Council of Health, a short time since, snatched a colored paper of this description from an infant's mouth, and by analysis obtained from it both* Arsenic and Copper.

"3. The delegates of the Council are of opinion that to ensure the observance of the ordinance, you should determine M. le Prefect, that a committee be appointed to visit the workshops of the manufactories of this species of confectionery: all the poisoned articles should be seized and their vendors fined. Lastly the delegates of the Council recommend as a measure of great utility, that on the day following the seizure, the names of the confectioners should be published in all the journals and placarded over the walls of the city.

In conclusion, the delegates of the Council believe that an ordinance, founded on the principles thus pointed out, will prove of essential service, by suppressing a practice so pernicious to the public health."

The immediate result of this pointed and satisfactory report was the issuing of an ordinance from the prefecture of police, dated the 10th of December 1830, and signed by the Comte Treilhard, in which the practice is denounced in the most energetic terms, the poisonous ingredients specified, the harmless enumerated, and in addition to the proposals of M. Andral, orders were given that no confectionery should be sold, unless wrapped up in paper, stamped with the name and address of the confectioner. Further by this edict, the vendors are held responsible for all accidents occasioned by the confectionery or liqueurs sold in their establishments.

"Pursuant to these resolutions, the visits were made, and several poisoned specimens were destroyed. Generally speaking, the confectioners gladly banished from their laboratories the pernicious materials, and availed themselves of the harmless substitutes recommended in the report. Lastly, M. Chevallier describes the mode in which the sulphuret of mercury (vermillion), the chromate of lead, and the arsenite of copper (schweinfurt green,) may be detected by chemical analysis.

"The preceding abstract, sanctioned by the name of Mr. Chevallier, and of that illustrious pathologist M. Andral, is amply sufficient to entitle me to the attention of the public, while I describe the extent to which the practice of using poisonous colors is carried in London, and thence disseminated over the United Kingdom, and *its foreign colonies and possessions*.

"On the subsequent day to that on which I perused the article just alluded to, I purchased, in company with my friend Dr. Green, at several shops, different specimens of colored confectionery, and of colorless articles, wrapped in stained paper. Of the colored articles, the greater number (class 1) were sold expressly for eating, some (class 2) cast into small figures of cards, &c., were *apparently* rather intended for ornament, but were sold without restriction, and lastly, some (class 3) were expressly designed for ornament alone. Of the first class, I examined about thirty different kinds, and found the reds tinted as follows:—

Ten specimens of Red Comfits, &c.

1 Minium, or red oxide of lead.
2 Red sulphuret of mercury (vermillion).
1 Mixture of both the former.
2 Of *a yellowish or orange tint*, chromate of lead, and a vegetable lake of lime.
2 Cochineal, with a trace of *vermillion*.
2 Vegetable lakes of alumina and lime.

10

"It is here seen, that of the ten specimens of comfits sold for eating expressly, six contained mineral poison; all these specimens, with one exception, were only colored externally.

"Of the *yellows*, class 1, seven specimens of different forms and tints. Four *Gamboge*, colored externally; one Colored throughout, a vegetable lake of lime; one Colored throughout, oxide of lead, and traces of antimony, or Naples yellow. Six of the seven consequently contained deleterious substances.

"Of the *greens*, class 1, several specimens, all were colored by Prussian blue and a vegetable yellow lake of alumina, mixed with the sulphate of lime, except one specimen of which I had only two comfits, and which gave me a mixture of copper and lime.

"The *blues*, class 1, were chiefly Prussian blue, and contained no hurtful compound.

In the second class, or those *apparently* intended for ornament, but sold without restriction, and formed in all sorts of fantastic shapes, of eight forms of yellow, three contained chromate of lead, one of Naples yellow; one massicot or yellow lead, and three vegetable lakes of alumina and lime. All these were colored throughout, and contained moreover sugar, and the sulphate of lime or Plaster of Paris.

"The *reds* in this class were of six specimens, three vegetable lakes of alumina or lime, one chromate of lead, with a red vegetable lake, two red lead.

"The *greens* and *blues* were composed as I described in class 1.

"In the *third* class, the composition was precisely the same, and the proportion little different from class 2.

"The papers were next examined, especially those used for enveloping the sugar drops called "Kisses"—without exception the reds were colored by the red sulphuret of mercury, the yellows, by the chromate of lead, and many of the greens by verdigris, or the carbonate of copper.

"With respect to the quantities of the poisonous substances, I had not leisure to submit the various products to the tedious process of delicate weighing; moreover, it appears to be altogether unnecessary, as the mere presence of the minutest possible quantity of any such substance should not be allowed; I will merely remark that one concern in the city from which I have obtained the greatest number of poisonous specimens, employs eleven men daily in the preparation of these articles, furnishes immense quantities of them to country confectioners, supplies many of the minor shops in the metropolis, and, if I am rightly informed, exports to our *foreign possessions* to a considerable amount. Extent of manufacture always implies extent of sale, and in this case the ratio of the consumption of course equals both. I cannot, therefore, be accused of exaggeration, when I assert that *millions of children* are thus daily dosed with metallic and vegetable poisons, in minute quantities it is true, but in quantities dependent on their amount on the caprice of a workman or a machine, and sufficient in the minutest degree to exercise their peculiar insidious effects, if taken as a practice from day to day—neither are these effects chronic alone, for not long since an *acute* case of poisoning arising from the use of confectionery of this description occurred in the children of a highly respectable family in Southwark, and, on analysis, the comfits were found to contain minium or the red oxide of lead."

It would appear almost incredible, that England, whose legislation confers inestimable benefits on its subjects, and which sheds its radiance over the world, should, to this day, remain so far behind its continental neighbours, as to afford no protection against offences and abuses of the description now brought to public view. No subject can be of deeper or more vital importance, as that which is intimately connected with the general safety of the community; and none ought therefore more imperatively to call into action, the patriotic feelings of statesmen in every country—yet England and the United States are still the only nations in which a code of laws for the preservation of the public health, does not form a material part of the jurisprudence of the country—there are, it is true, in maritime towns, quarantine regulations to guard against the introduction of pestilential and contagious diseases from abroad—these laws include a few provisos for the removal of any sources of infection that may exist, independently of those arising from shipping, but here they end. Both countries are alike destitute of a general medical police—and I fear much, that, notwithstanding the philanthropic exertions of Dr. O'Shaughnessy in bringing the subject of these articles before Her Majesty's government, both by submitting documents of the most irrefragable nature and authority—specimens of the poisoned substances and personal interviews with the Secretary for the Home Department, the evil has been left undisturbed, if not, without consideration, at least, as far as my information goes, without penal statute or municipal surveillance or restriction.

With regard to the right of England to export its manufactures to its colonies we can claim no interference save the exactions of certain imposts, but so far as those of a domestic character are concerned, the Provincial Legislature may exercise its control and authority, and by its enactments, render penal the manufacture and sale of such preparations of confectionery as are decidedly destructive and injurious to the healths of the inhabitants. It is therefore to be hoped, that during the next session of Parliament, the subject will engage the attention of government, and meet with that consideration from the Legislature, which its importance so justly demands.

Yamaska *(near Sorel,)*
15th June, 1846.

To the Editors of the British American Journal.

Mr. Editor,—Should you think the annexed case worthy of publicity, I shall feel obliged by your giving it insertion in your valuable Journal. It tends to illustrate with what scanty means an operation, generally considered difficult, can be performed in case of emergency.—I am, yours, &c.

GEORGE HOLMES, Surgeon.

Perth, C.W., April 21, 1846.

In 1840, I was visiting one of the back townships, about 30 miles from home, when I heard that a poor old man, residing a short distance from the house where I was stopping, was suffering from obstinate constipation, and was considered by his neighbours to be in a dying state. I volunteered my services, which were thankfully accepted. On my arrival at his house I found the patient, who was 63 years of age, in great suffering; the bowels had not been relieved for five days, and he was then vomiting stercoraceous matter, pulse 130, and occasional hiccup. On examination, I found a tumour, about the size of a small hen's egg, in the groin,* in the situation generally occupied in femoral hernia; rather tender

* The author does not state in which groin the tumour was situated.—EDS.

on pressure, but elastic, and increasing in size on the patient's coughing; the abdomen tense, and rather tender. He gave the following history of the case:—When about 30 years of age, he had a violent attack of hooping-cough, and, after a severe paroxysm, felt a swelling rise suddenly in his groin. This soon disappeared, but returned again at intervals. He consulted a medical man in the United States, where he was residing at the time, who gave him a truss, which he wore for eight years constantly, when he left it off, as the tumour did not return, and, to all appearance, he was cured. Indeed, it did not again show itself until five days previous to my seeing him, after a lapse of 25 years.

I bled him, used the hot bath, and applied the taxis, but all in vain. The symptoms being so unfavourable, and the case appearing so manifestly urgent, that I determined to lose no time, but to operate. To my extreme mortification, I discovered that I had left my pocket-case at home. What was to be done? There was no medical aid within 20 miles, and to send to my own house in the bad state of the roads would occupy too much time; indeed, the delay would have been fatal. I had in my pocket a sharp, long-bladed penknife, and with this I determined to hazard an operation—having first made a director out of a piece of hard wood. I commenced by making an incision through the skin over the tumour, and then a transverse one at its base, forming an inverted T. Having dissected back the flaps, and divided the cellular and fascial covering, and exposed the hernial sac, I found, on opening it, a a large fold or knuckle of intestine of a dark brown colour, and of a very glazy appearance. The sac contained very little serum. The next step was to insert my director under the stricture which was very high up, and having guarded my penknife, by rolling some thread round it to make it resemble a hernia bistoury—passed it upon its wooden guide, and divided the stricture with very little difficulty, and returned the intestine. Very little blood was lost; the wound was closed and the patient put to bed. About an hour afterwards I administered an enema, which thoroughly emptied the bowels and having left the poor man an opiate, I consigned him to the care of an old midwife, hardly expecting a recovery. About a month afterwards I had the satisfaction to hear that he was quite convalescent; and I afterwards saw him—about two years after the operation—in very good health and quite free from any herniac swelling at all.

I may here remark, that one very singular feature in this case is, that it was a crural or femoral hernia occurring in the male. Of this there can be no doubt, as the tumour began at the edge of Pouparts ligament, and then proceeded downwards between the crural vessels and the os pubis, and the abdominal ring, and the parts above the ligament, could be distinctly felt, perfectly uncovered by the hernia. This form is very rare in the male, although Lawrence, in his work on "Hernia," states his belief, that it is not so uncommon as many authors consider it. It is the first instance that has ever come under my observation, either in private or public practice, although during a period of nine years I was constantly in attendance in some of the largest hospitals both in England and Ireland, where operations for hernia were of frequen occurrence.

Third Annual Report of the Managers of the State Lunatic Asylum, made to the Legislature, January 23, 1846. Albany, N. Y.

Embodied in the report of the managers of the New York State Lunatic Asylum, at Utica, for the year 1845, we find the physician's report, by Dr. A. Brigham. The whole constitutes an interesting and useful document, and, as in previous pages of this journal we have devoted some space to remarks on the operations which have taken place during the same period, in a few of the chief asylums of the United States, we purpose now to lay before our readers the chief features of interest in the present one.

The Asylum was opened for the reception of patients in 1843, but having been found ill suited, in point of accommodation, to the numerous applications, by an act passed in May, 1844, the Legislature appropriated a further sum of $60,000, for the erection of two additional wings of brick, each 240 feet by 38, and which will be completed during the present summer. The original grant, however, being still found inadequate to carry out the design, an additional appropriation of $17,000 is required; and when finished, the building will afford ample accommodation for the reception of 600 patients.

From Dr. Brigham's report, we obtain the following general return of admissions and discharges:—

		Men.	Women.
Remaining in Asylum from preceding year,	260	131	129
Admitted during year 1845,	293	151	142
	553	282	271
Of this number discharged, Recovered,	135	76	59
Improved,	78	39	39
Unimproved,	34	14	20
Died,	21	10	11
	268	139	129
Remaining in Asylum Nov. 30, 1845,	285	143	142

During the three years, since the opening of the institution, we find that 844 patients have been admitted, viz.—431 males, and 413 females; who thus rank in number, in accordance with their *civil condition*, married, 409; single, 392; widows, 31; widowers, 12;

thus presenting an anomaly in the reception of more married than single. Most asylums in the States receive more single than they do of the former class.

A number of tables are comprised in the report, some of which are of little more than mere local importance. The third table, is one of interest, however, and serves to confirm the fact, that the age at which insanity begins to manifest itself, most chiefly, is between that of 20 and 30, a point confirmed by the statistics of other countries. Thus, of 844 patients, in 173 it developed itself between the ages of 20 and 25; and in 140, between 25 and 30; or in 313, in the third decennial period of life, forming a proportion of nearly one-third of the whole.

The report comprises a full detail of the general curative measures adopted in the Asylum. Among them Dr. B. "considers labour as among the most essential of the curative means," and, when practicable, agricultural employment is that kind which is generally selected, the labour of the patients being rendered serviceable in the support of the establishment. In the winter months, when out-door employment becomes injudicious or impossible, patients are employed in different mechanical occupations within doors, or in amusing themselves in some other manner. Schools are in successful operation, and appear to have been "especially beneficial to the demented or those approaching this condition. In such, the active state of the disease which originated the mental disturbance has passed, and left the brain and faculties of the mind in a torpid state. In these cases, medicine is of little use; but they may be improved, by arousing and calling into exercise, the dormant powers of the mind." There appears to be another class of patients, to whom mental exercise of this kind appears to have proved, also, peculiarly serviceable, viz., "the uneasy and nervous, and the restless and irritable." We think that this variety of moral treatment has been too generally overlooked in the management of the insane; and we cheerfully diffuse this general result, which appears to have flowed from this part of the treatment of such cases: "If we are not greatly deceived, our schools and other mental exercises have been very beneficial to our patients; contributing largely to their contentment and cheerfulness." "By these means, we have the satisfaction of seeing many patients, not only recover from their mental disorder, but that their minds have been improved, a fact of which they themselves are conscious, and for which they feel grateful. In repeated instances we have been informed by the relatives and neighbours of patients who have here recovered and gone home, of *their increased intelligence and marked improvement of mind.*"

Dr. Brigham concludes his report by offering some general observations: 1st, on the prevention of insanity; 2nd, on the neglect of the study of insanity by physicians; 3rd, on the predisposing causes of insanity; 4th, on the immediate or exciting causes; 5th, on asylums for idiots; and we cannot better conclude our remarks on this able report, than by quoting the author's words on the last head enumerated.

ASYLUM FOR IDIOTS.

By the term *Idiot*, we mean to designate a person in whom the mental faculties have been wanting from birth, or have not been manifested at the usual period, owing to an original defect or to disease of the brain in very early life. The same persons are sometimes denominated *imbeciles.*

From each enumeration of the inhabitants of this State, we learn that the number of idiots is very great. By the census of

1825, there were	.....	1421
1835, "	.....	1684
1845, "	.....	1610

We have already stated our opinion that some demented insane persons are classed with the idiots in the census; still we believe the actual number of the latter is very great.

What is their present condition? Where and how are they kept? We fear that full and correct answers to these questions would reveal a mass of wretchedness and misery wholly unexpected to the people of the State.

Some we know are in the county houses, while many are left to wander about, exposed to the inclemencies of the seasons, to want and suffering, and very frequently to the insults and gross abuse of the vicious. Not unfrequently some become mothers. Several affecting instances of this kind have come to our knowledge. One of the most abject and pitiable of this class, a white female, has had two children, one white and one black. Humanity, the preservation of public morals, and true economy, call for the better guardianship and protection of this unfortunate portion of the human race.

Can any thing be done for the improvement and welfare of this neglected portion of our fellow creatures? If so, we have no doubt the benevolent spirit of the age will soon require it to be done.

We are of opinion that very much may be done for their improvement and comfort; that many, instead of being a burden and expense to the community, may be so improved as to engage in useful employments and to support themselves; and also to participate in the enjoyment of society.

Idiots exhibit different degrees of intelligence. While some possess no more knowledge or capacity for acquiring it, than the brutes—others exhibit considerable intelligence or aptitude to acquire particular kinds of knowledge. They are capable of learning trades and to read, and of being taught music. Some are particularly interesting from the simplicity of their manners, quick observation and witty remarks, as we know from the history of those times, when it was common to have such at the courts of kings.

But they all need protection and guidance, and as they now exist in this State, are a very necessitous and altogether too much neglected class of persons.

As we have said, we believe many of them may be much improved and be rendered far more intelligent and comfortable, and capable of supporting themselves. This has been found to be the case in other countries where asylums and schools for idiots have been established.

Various have been the attempts of benevolent individuals for the improvement of idiots, but no thorough and systematic means have been adopted until within a few years. So early however as 1828, M. Ferrus, Inspector-General of

the Lunatic Asylum, of France, organized a school for idiots in Paris, and in 1830, M. Voisin, Physician to the Bicêtre Lunatic Hospital of Paris, and to whom the honor seems chiefly if not wholly due of directing attention to the various capacities of idiots with a view of improving them, published a work on the subject. Since then successful attempts have been made to cultivate their intellects and improve them. In France, Switzerland and Prussia, asylums and schools have been established for their benefit, and from recent accounts we learn that more good has resulted to these unfortunate beings than the most sanguine expected.

In Paris, at the school of M. Seguin, and at Abendberg in Switzerland, at Dr. Guggenbuhl's Institution for Cretins, and at Berlin, under the care of M. Saegert, many have been raised from the lowest and most wretched state of animal existence to comparative happiness. Their habits have been improved, propensities regulated and their affections awakened. A considerable number have learned to read, write, draw, play on musical instruments and to labor. The change in some is described as almost miraculous by gentlemen from England and the United States, who have visited these institutions.

Abundant proof of the vast improvement that has been effected in the condition of idiots, is furnished by a recent report of a committee appointed by the Academy of Sciences at Paris, to examine the *Memoir of M. Seguin, on his method of instructing young idiots and imbeciles.* This able report drawn up by M. Pariset, after mentioning the wretched condition of the idiotic, and the great difficulties to be encountered in efforts to instruct them, declares that M. Seguin has, for the most part, overcome these difficulties, "opened a new career to benevolent exertion, and given to hygiene, medicine, and moral philosophy, an example worthy to be followed."

Confident in the success of an experiment to improve this class of persons and to render their condition far more comfortable, we cannot but hope that it will soon be made so under the direction of the State of New York. We scarcely know of a subject more worthy of the attention of the patriot, philanthropist and Christian.

Elements of Physiology including Physiological Anatomy, for the use of the Medical Student, by William B. Carpenter, M.D. — Philadelphia: Lea and Blanchard.

So rapid has been the progress of Physiology within the last few years, particularly in that department of the science to which the name of Physiological Anatomy has been given, that the student has hitherto not been able to obtain, in any one work, sufficient materials to lay even the foundation of his knowledge of this important branch of his profession; and yet the history of medicine does not present an era in which greater discoveries have been made in Physiology, or in which so much talent, industry, and energy have been called into operation for the elucidation of its mysteries.

In the work before us, this deficiency is supplied; it contains a clear and concise resumé of the present state of the science, without being too much condensed for the beginner.—With the works of Dr. Carpenter we have long been familiar, and for his talents we entertain the highest respect, yet we have often thought that in his various treatises on Physiology, he would have been more successful as a teacher had he not been so brief in the manner of treating his subjects,—*he would have taught better had he considered his reader more ignorant.* The truth of this, has been frequently forced upon us, in reading his descriptions of various parts of Physiology, with the details of which we were at the time familiar, and we have asked ourselves, "could we have obtained a clear notion of this subject, if ignorant of it until we met with this description?" In illustration of this we need only refer to the chapter on "Cytogenesis," to some passages on the Blood, Digestion and Respiration, in his treatise on Human Physiology, and we feel satisfied, that a mere beginner would obtain any thing but a definite idea of what the author wished to convey. We can easily imagine, that one like Dr. Carpenter, who has made a branch of knowledge his particular study for several years, and whose writings have been either directly or indirectly connected with that subject, should, when compiling a manual for students, err, from too great anxiety to crowd into as small a space as possible a great mass of facts, forgetting that these facts must be accompanied by details to make them intelligible to minds to whose consideration they are for the first time presented.

In the present work we are glad to perceive a complete absence of the faults alluded to; each subject is treated fully and satisfactorily—and we have no hesitation in stating, that it is admirably adapted for the use of the student, who is about to commence the study of Physiology; and for the Practitioner who wishes to place himself *au courant* with the state of the science.

In the preface, the author informs us that henceforth he purposes devoting his talents and time to original investigation. We have no doubt his researches will tend much to the elucidation of the many questions still unsettled, a task for which he is well suited, not only on account of his freedom from prejudice, but from his possessing in so high a degree, strong reasoning powers and great candour.

Fevers, their Diagnosis, Pathology and Treatment, prepared and Edited, with large additions from the Essays on Fever in Tweedie's Library of Practical Medicine, by Meredith Clymer, M. D. Philadelphia: Lea & Blanchard.

The above work is a collection of the various articles on fever published many years ago in England, and furnished by Drs. Christison, Shafter, Burrows, Gregory and Locock. The original essays are deservedly held in high estimation, and their value is now greatly enhanced by the copious and judicious notes of the American Editor. We have noticed, that besides bringing

the information on each subject down to the present state of our knowledge, he has supplied many omissions in the text of the articles, and has, in this manner, presented before the profession, each subject in a more perfect state than could probably have been done by the respective authors themselves. He has also supplied an able original article on Typhoid Fever, which we strongly recommend to the perusal of those who have not yet made up their minds as to the true nature of this disease. Dr. Clymer adopts the views of most modern pathologists—that it is separate and distinct from typhus. He has supplied much valuable information on the subject of treatment.

As there are many of our readers who do not possess the "Library of Medicine," we strongly recommend them to purchase the above work, for it contains the most recent and valuable information on this important class of diseases.

ANATOMY AND PHYSIOLOGY.

ANALYSIS OF THE BLOOD,

BY M. DUMAS.

Fibrin is easily separated by whisking recently drawn blood, and the albumen is also readily separated by allowing the serum to coagulate. It is not so easy, however, to obtain the globules free from albumen and fibrin, and a method indicated by Berzelius, and improved by Muller, suggested to MM. Lecanu and Figuier a process for effecting this object. This method is founded on modifying the relations of the blood to the pores which exists in filtering paper. If blood, deprived of fibrin by whisking, and therefore liquid, is thrown on bibulous paper, the globules pass through the filter slowly, but almost completely. If, however, the blood before it is thrown on the filter is mixed with three or four times its volume of a saturated solution of sulphate of soda, it is so modified that all the globules remain on the filter, while the liquid in which they floated passes through, and thus the globules can be collected. But the application of this method is attended with some difficulties,

Thus, if blood has been defibrinated for some hours, on attempting to filter it after the addition of even an exaggerated quantity of sulphate of soda, it passes with difficulty, and the filtered liquid is always discoloured. It is therefore necessary to employ recently drawn blood; and after it has been defibrinated, and the albumen has coagulated, it is passed through a fine linen cloth into a solution of sulphate of soda, and is then thrown on the filter, a limped or slightly yellow fluid passes through, and all the globules remain on the filter. On washing the globules thus collected with a further quantity of solution of sulphate of soda, it soon happens, however, that the liquid passes through coloured, slightly at first, but ultimately of such a deep red colour as clearly to indicate a material alteration of the globules collected on the filter, It is, however, necessary, in order to obtain the globules in a state of purity, to wash them several times with a solution of sulphate of soda, as otherwise they retain a certain quantity of the serum of the blood—that is to say, of an albuminous liquid, whose presence masks their real characters.

After many fruitless attempts, M. Dumas has discovered a remarkable property of the globules of the blood whereby this difficulty may be obviated. So long as the globules remain in contact with air or with aerated water, while they are arterialized in a word, the solution in which they float passes the filter colourless, and leaves them behind; but when the globules assume the violet colour of venous blood, the filtered liquid becomes coloured. It is consequently necessary to maintain the globules in the arterial state during the entire process of filtration and washing; and this M. Dumas effects by immersing in the filter a small tube through which a constant and rapid current of air is made to traverse the liquid; while a continuous stream of solution of sulphate of soda replaces the liquid as it filters away. It is however, essential to the success of the process that it shall be quickly performed; if the globules are suffered to collect in ever so thin a layer on the sides of the filter, those in contact with the paper are deprived of air and assume a violet colour, and the liquid then filters through coloured.

The globules, in fact, under those different circumstances behave, as it were, like living beings, capable of resisting the solvent action of the sulphate of soda so long as they retain their vitality, but yielding to its action when asphyxiated by want of air. Chemists, then, should endeavour to maintain their vitality—by agitating the liquid, keeping the liquid constantly aerated; and finally, by maintaining it at the temperature of the animal body. By means of these combined precautions, the globules may be obtained pure in a few hours, provided we do not attempt to prepare more than five or six grammes (℥v. to ℥ii.) at once.

The rapid alteration of the globules when deprived of the direct contact of atmospheric air; the extreme energy wherewith in a layer of globules those on the surface seize on the whole of the oxygen dissolved in the water, are circumstances highly calculated to attract the attention of physiologists. In discussions and calculations respecting respiration, the blood has always been considered as a homogeneous liquid placed in contact with air in the lungs, and undergoing changes more or less rapid. The serum of the blood is doubtless an homogeneous liquid, but the globules are so many vesicles floating in the serum, and endowed with a proper respiration, whose effects, confounded with those that result from the respiration of the serum, produce by their combination the general phenomenon of respiration. Putting aside for a moment the proper action of the serum on the air, it may be said that the respiration of one of the higher animals, of man in particular, has especially for its object to furnish oxygen to the globules of the blood, and to expel the products into which it is converted.

In attemping, then, to calculate the effects of respiration, the membranes forming the envelopes of the globules must be taken into account, for it is known how different pure and simple solution of gases is from the strange phenomena of endosmose through membranes separating two reservoirs full of different gases, or of two liquids charged with different gases. Respiration, then, to be well understood, should be studied in these vesicles—*i.e.*, the globules of the blood, the seat of the principal phenomena which it is intended to accomplish, and whose organization strangely complicates the law of physics. The mode of action of the blood globules on air, whether circumambient or in solution, and the conditions under which that action proceeds, naturally becomes consequently a matter of great interest.

The microscope and agitation with oxygen afford two equally certain methods of recognizing the integrity of the globules and the preservation of their fundamental property. When the globules are entire, the microscope indicates the fact; while they retain the power of being arterialized, they redden on contact with oxygen. This property remains after the blood is taken from the animal and when it has been deprived of fibrin, of albumen, and of serum, it is therefore independent of fibrin, albumen, and serum, and the vital influence of the animal. Sulphate of soda does not destroy this property, but many of the other alkaline salts do. Common phosphate of soda exists in the blood as sulphate of soda does, and, like it, its saturated solution when added to blood does not prevent it assuming an arterial colour when agitated with oxygen. Thus, so far as this property at least is concerned, the blood may contain, without inconvenience, much larger quantities of sulphate and phosphate of soda than naturally exist in it.

Salts of organic acids, such as Rochelle salts, are in the same predicament, whence it is probably that lactate of soda may exist in considerable quantity in the blood without the property of the globules in question being interfered with. Experiments shows that the case is quite different with sea salt, and with chloride of potassium. If recent whisked blood is saturated with sea-salt, and then agitated with oxygen, it remains violet coloured. Sal ammoniac has the same effect.

Is there any relation between those facts and the influence attributed to the abuse of salted meat in predisposing to scurvy? Is the action of sal ammoniac on the blood connected with the poisonous effects of all the ammoniacal salts?

It is to be observed that salts which preserve to the blood the

power of becoming arterialized, at the same time preserve the integrity of the globules, and allow the serum to filter colourless. On the contrary, salts which destroy the property of becoming arterialized, allow the serum to pass the filter discoloured. Those experiments render it probable that the colouring matter of the blood is especially fitted to assume the characteristic colour of arterial blood while it remains combined with the globules—a property which is lost or impaired when by the destruction or alteration of the globules the colouring matter becomes really dissolved. A careful comparison of specimens of blood treated with alkaline salts, capable of saturating it cold and agitated with oxygen, gives the following results: Salts containing complex organic acid, as the tartaric and citric, preserve the integrity of the globules better than salts of mineral acids. Salts of soda preserve the same property better than salts of potash and of ammonia.

An unexpected relation, then, seems to exists between the integrity of the globules, the arterial condition of the blood, the phenomena of respiration, and the nature and proportion of salts dissolved in the blood. The performance of a few experiments of this kind will produce the conviction that asphyxia may be excited in the midst of the air or of oxygen without any other change than the introduction of a salt which modifies the blood globules.

M. Dumas then indicated the importance of examining the properties of the blood globules in disease. It seems probable that their degree of tendency to alteration might be estimated by mixing blood, defibrinated or not, with graduated quantities of a suitable salt, such as sea-salt or sal ammoniac.

In order to effect the elementary analysis of the globules of the blood, M. Dumas first isolated them by means of sulphate of soda. He then, having thoroughly separated the serum, dried them *in vacuo* with concentrated sulphuric acid. Boiling alcohol or ether then render them insoluble in water, and by means of the latter menstruum the sulphate of soda with which they are mixed was then dissolved out. M. Dumas concludes from his analysis that the globules belong to the family of albuminoid compounds. They contain somewhat more carbon than casein or albumen do, which he attributes to the red globules containing a colouring matter more carbonized than they are themselves.—*Gaz. Med. de Paris.*

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

May 12.—Dr. Babington in the chair.

On the relation between the constituents of the food and the systems of animals.

By R. D. Thomson, M.D.

Lecturer on Practical Chemistry in the University of Glasgow.

(Communicated by Sir B. C. Brodie, Bart.)

The first individual who showed that wholesome food should contain matters identical with animal substances, was Beccaria of Bologna who wrote an excellent paper on the subject in 1742. Dr. Prout has taught and extended this view for more than twenty years, and his opinions are now followed by all physiologists. That the systems of animals are capable of sustentation by a supply of fibrinous matter alone, is obvious from the history of the primitive inhabitants of the prairies of America; but it appears from experiments made on the nutrition of animals with pure fibrin, that an auxillary in the production of animal heat is either indispensable or advantageous, since animals fed on fibrin alone have invariably declined in health—(Magendie.) That the amount of calorifient, or heat-producing food, in contradistinction to nutritive food, properly so called, as it has been well defined by Liebig, is out of all proportion greater than that required to supply the waste of solid matter of the body is obvious from an experiment made by the author on a cow, in a state of rest, in which it was found that 15¼lbs. of food were taken into the circulation in one day. Of this, only 1¼lb. was nitrogenous or nutritive food, the rest being calorifient and saline. From this experiment, frequently repeated with nearly the same results, the author concludes, that in such a condition of the system, the natural relation of the nutritive to the calorifient constituents is nearly as 1 to 8¼. The author gives formulæ for calculating the amount of nutritive and calorifient food, with a view to determine the laws of dieting. He gives tables from his own analyses of the amount of nutritive matter in about twenty different kinds of vegetables, (principally farinaceous food.) By these it is shown that oatmeal consists of 1 nutritive and 5 calorifient matter, and barley 1 and 7—facts which explain the universal employment of these substances. From these tables it is also inferred, that as milk is the natural food of the infant mammalia, the constitution of their food should be formed on the same type, and that the use of arrow-root or starchy food, where the relation of the nutritive to the calorifient matter is as 1 to 26, instead of being, as in milk, 1 to 2, is opposed to the principles attempted to be established by the author. He observes that, in nutritive tables, it is usual to give a column of equivalents—representing, for example, 100 parts of beans as equal in nutritive power to 1160 of starch; but according to the author's views, such a method is not founded on scientific principles. In a correct plan of dieting a proper equilibrium must be maintained between the wants of animal organism and the constitution of the food. The importance of this view is supported by the results of an extensive series of experiments, made by the author, with different kinds of food, upon cows. These results are highly interesting, and were given in a tabular form, but our limits will not allow us to detail them at length. The author concludes by observing that, when more condensed forms of vegetable are required, the object might be obtained by mixing certain portions of American flour with different kinds of meal, which could not otherwise be raised by fermentation—for example, by mixing equal parts of flour and oatmeal, flour and pease, or barley meal, excellent bread could be formed; and two-thirds of Indian corn, with one-third of flour, yielded an excellent loaf. Specimens of bread made with various mixtures of grain were exhibited.

Dr. Thomson, in answer to a question, stated that the quantity of water consumed by the animals in these experiments was truly enormous. The brown cow swallowed six gallons at a time. His observations on this point went to prove the correctness of these made by Sir B. Brodie, who had found that these large quantities of water had been disposed of in the colon; the stomach could not hold them; thereby proving that absorption of saline matters went on in the colon.

Dr. Snow said that he considered organic chemistry would have to be much further advanced than it is at present before it would be safe to follow it, in giving directions on diet, instead of being guided entirely by experience. It was true, that farinaceous food did not suit young infants especially in large quantity; so far, experience coincided with Dr. Thomson's theory; but if we were to argue from the chemical constitution of the food to be adopted after weaning, it would have to be a sort of diet that we had never known given to children; they could not digest beans, and the only alternative would be, an exclusively animal diet. But the fact was, that the chemical constitution of milk was no criterion of what should be the food afterwards; there was the smallest possible difference in the chemical constitution of the milk, which was the earliest food of all the mammiferous class; but no sooner was this left off, than they betook themselves to the most different kinds of nutriment, some living on grass, and others exclusively on flesh. This was in accordance with the circumstance, that there was a great resemblance in organization in the early period of the development of animals, and that they took in their specific characters as they grew up. Dr. Thomson had spoken of the albumen and other nitrogenous constituents of food as the nutritive part, and of the farina as the calorific portion. He had indeed admitted that the former might assist in the function of respiration, but he had not admitted that starch might assist in nourishing the fibrinous tissues. It happened, however, that many animals living exclusively on coarse ve-

getable food, of which the nitrogenized elements formed but a small part, were amongst the strongest and most active of the animal kingdom, and possessed a lower temperature than did in general, the carnivora, many of which were lazy and inactive in their habits. Taking all circumstances into consideration, the opinion of Dr. Prout must be the true one—that the saccharine elements of food, as he called them, combined with the nitrogenous principles of the bile, were thus capable of renewing the waste of the body, and that the vegetable feeders were not condemned to burn off the greater part of their food as fuel in the lungs.

Dr. Golding Bird, whilst he bore testimony to the industry and patient investigation which characterized the researches of Dr. Thomson, could not agree in the conclusions at which he had arrived with reference to the dietary of persons in health and disease. It should be recollected, that previous to the labours of Liebig, the proportion of carbon which existed in various articles of food was thought to offer a fair indication of their nutritive power. That distinguished philosopher, however, had shown the fallacy of such a view, and had proved, that with the exception simply of the fatty tissues, every structure in the body was supported, and its waste supplied, by the nitrogenized elements of food. Dr. Thomson's paper had the merit of satisfactorily showing that animals could not be well nourished on either nitrogenized or carbonized food by itself, but that there should be a certain proportion between the two, so that the richly-nitrogenized food might make up the waste of tissue, whilst the richly-carbonized would become a source of animal heat. He (Dr. Bird) did not believe that the composition of the food of the infant animal, or milk, gave us any sure indication, in our selection of nutriment for the adult; for milk, nearly identical in composition, afforded nourishment to the infant cat, sheep, and porpoise; whilst, in after life, how remarkably different was the food of these different animals. Admitting that the tables of Dr. Thomson were correct, it would seem that the most nutritious food for infants and invalids, next to milk, would be beans and peas. This could not be followed out practically. White bread, according to the tables, was below the beans and peas in nutritious power; but, trusting to the same authority, a portion of cheese added to it would theoretically raise it high in the scale of nutriments: yet who would carry out this view practically? He admitted that infants might be literally starved from eating arrow-root, in consequence of their supply of nitrogen being cut off; he yet believed that in these inquiries sometimes more than mere chemical principles must be taken into the account in our determination of the diet we shall select for our patients. The ease with which different kinds of food were digested, and the vital endowments of the stomach, must not be overlooked.

Dr. Babington observed that the last speaker had gone much too far in his criticism, as every one must be aware that animal food and some other kinds of condensed nitrogenous matter might not be suited to children, from their difficulty of digestion. He considered the paper a very valuable one, and deserving of the thanks of the society.

Although one of the speakers stated that there was not much novelty in the views brought before the society by Dr. Thomson, we confess, that to us and to all with whom we have conversed on the subject, many of the facts and deductions are quite original. The table, which exhibited an increase in the butter of the milk of the cow, in proportion to the augmentation of nitrogen in the food, is perfectly new, and apparently at variance with the theories of Liebig, who derives the butter from the starchy constituents of the food; but which Dr. Thomson reconciled, by considering the food in these cases to be so formed as to restore the proper equilibrium of the system of the animal. This view also leads to the novel suggestion, that by experiment we should determine the amount of matter removed from the system under different circumstances of rest and exercise, and that a true plan of dieting should be founded on such knowledge, and should not be left to mere instinct. We believe, with Dr. Thomson, that on this consideration depend the true laws of dieting—a subject of so much the greater interest in an artificial state of society, where the food is too frequently concocted to minister to the palate instead of to the condition of the waste of the system. The relation which Dr. Thomson instituted between the food serving for nutrition and that for the mere production of animal heat was very striking, and we have certainly never seen the subject so treated before. The analysis of arrow-root, tapioca, and sago, employing them as food for children. The table, already alluded to, showed, contrary to the statement of one of the speakers, that arrow-root could not produce fat, and that such views are imaginary. The table containing the amount of albuminous matter in various kinds of vegetable food was highly important. The higher position occupied by Scottish oats and barley-meal over English flour was sufficiently striking, and explains the cause of the great fact of entire nations subsisting mainly upon these kinds of grain. We firmly concur in the concluding observation in Dr. Thomson's paper, that his remarks tend towards an extensive field of experiment and deduction, of a highly practical nature, and may assist in indicating the direction in which the physician should pursue his inquiries when studying the laws by which the animal system is to be retained in a state of health.—*Reporter of Lancet.*

SURGERY.

RADICAL CURE OF TWO LARGE UMBILICAL HERNIÆ OF TWENTY YEARS STANDING.

By G. Heaton, M.D.

A lady, aged 54 years, had given birth to many children and become very corpulent, muscles loose and pendulous, in consequence of which she had suffered for 20 years from a large increasing omental and intestinal tumor, situated above, and to the left side of the navel. The omental portion of the protrusion had resisted every effort at reduction by taxis and other measures, from time to time made use of. In truth, it had been considered, by the patient and friends, an irreducible rupture for twelve or fourteen years; causing great suffering, at frequent intervals, from colic pains, constipation of the bowels, flatulence, swelling, sinking at the pit of the stomach, soreness, &c. After ten days' perseverance with the usual treatment and manipulation, the whole hernial tumor was returned into the abdomen, leaving and opening through the abdominal parietes sufficient to admit three fingers. The subcutaneous operation for the radical cure was now performed, giving but little pain or uneasiness to the patient, and resulted in the most gratifying success. But four or five weeks were necessary to cure the patient of her troublesome and dangerous complaint, so rapid was her convalescence. She has since continued well; general health and spirits greatly improved.

A gentleman of about 55 years of age, very fat, weight over 300 pounds, has been troubled with an umbilical rupture for 20 years. The protrusion had assumed a double form, situated on either side of the navel; that on the left side was much larger, more prominent, soft, and elastic to the feel, than the one situated on the right side. The patient, before applying for treatment, had made use of a great variety of bandages, belts, trusses, &c., hoping to retain the protruding parts, but had utterly failed in all his attempts, and was now going about without any external support. The tumor of the left side of the navel had been constantly present, projecting freely, apparently without any hernial sac, and thought to be irreducible in part, for many years. Moderate and gentle pressure, even in the recumbent posture, made but little

impression for the first few days on the protrusion. It was not until one week of great perseverance in the usual preparatory treatment, that the hernia could be sufficiently reduced and retained within the belly, to admit of the operation for a radical cure, as in the above case. After subduing the constant tendency to protrude, existing in the parts concerned, situated on the right side of the navel, or median line, I operated for a radical cure, and was somewhat surprised to find a considerable escape of fluid from the slight puncture made in the integuments. Water is frequently found to exist in the hernial sac of an old scrotal hernia, but very seldom in an umbilical. As there were no indications of the presence of fluid on the left side of the navel, it is reasonable to believe that this must have existed for some time in a sacculated state. The operation and treatment which I find so uniformly successful in other forms of hernia, proved eminently so in this case, closing up the broken parts in a few days' time, and completing the cure in about three weeks. The patient, just before the commencement of his treatment, took a severe cold, which brought on an attack of spasmodic asthma, accompanied with cough, thereby preventing him from lying down in bed, day or night, for about two weeks. He felt no pain from the operation, and but slight pain at any time subsequently during the whole treatment and cure. He was also able to walk about his room from day to day, and go out back when necessary. What to me seemed not a little remarkable in the case, was that the protrusion on the left side of the navel, although seeming to be unwilling to yield by taxis and other means, and return into the abdominal cavity, showed no disposition to re-appear externally, after the first six or eight hours from the operation.—*Boston Medical and Surgical Journal.*

TREATMENT OF ANEURISM BY GALVANISM.

The following case of treatment of popliteal aneurism by galvanism has been just published by M. Petrequin, head surgeon of the Hotel Dieu of Lyons, who had read a paper on the same subject in October last before the Academy of Sciences: "A man, aged 70, presented himself for treatment of popliteal aneurism; and on the 22nd January, M. Petrequin commenced his mode of treatment in the following manner. The patient was laid on his right side, and a tourniquet was put on the thigh high up. Four very fine steel needles, fifty-six millimetres long, were introduced into the aneurismal tumour near to each other. Two of the needles were introduced on the inner side, taking care to avoid the trunk and branches of the saphena veins, and their direction was from above downwards; the two other needles were introduced on the outer side, also from above downwards in such a way as that the needles of opposite sides should cross each other within the tumour without touching each other. This done, the tourniquet was tightened on the femoral artery, merely to the extent of stopping the pulsation in the tumour and artery without affecting its size or tension; a pile made on the instant composed of twenty-one pairs of plates, ninety-three millimetres square, connected by bits of cloth steeped in a solution of common salt, was then applied by means of a couple of slender silver wires held in the naked fingers, and the electric current was soon in action; but as it was found very weak, the number of plates was increased, after three minutes, to thirty pairs, the action of which was continued for twenty-five minutes. A single needle only was touched with each pole of the battery at a time, but every two or three minutes the contact was changed to another, so that each needle received the current in succession, and of course passed in every direction, with the view of causing fibrous filaments in the tumour to interrupt the current of the blood through it, and so favour coagulation. Each new contact of the wires with the needles produced a smarting in the tumour, then contraction of the muscles of the calf, and a kind of shock in the sole of the foot. To remedy these unpleasant effects the needles were raised, and while the compression on the femoral artery continued to prevent pulsation in the tumour, the latter was enveloped with a bladder of ice; the compression was then taken off the vessel, and the ice continued for six hours, at which time the pulsation in the tumour was as before the proceeding had been commenced. At noon, on the 23rd, twenty-four hours after the galvano-puncture, there was no longer any throbbing in the tumour; the patient got out of bed, and walked some steps, but continuing to feel a slight stiffness in the leg. The following days the tumour gradually diminished in size, and became more firm, the lateral depressions at the knee showed, the stiffness of the joint disappeared, the leg could be completely extended, the motion in walking became free, and there only remained a slight sensation of weight in the foot."

This case speaks much for the further trial of electricity for the cure of aneurism, more particularly when we reflect on the dangers of operation, and the apparent harmlessness of the battery. We consider it particularly useful in the infancy of the method, as pointing out to those who may hereafter try it, how very weak the current may be, to produce the desired effect.—*Revue Medicale.*

ON SYPHILITIC INFLAMMATION OF THE EYE.

BY A. JACOB, M.D., F.R.C.S.I.,

Professor of Anatomy and Physiology in the Royal College of Surgeons, and one of the Surgeons of the City of Dublin Hospital.

That inflammation of the eyeball is one of the forms of disease in which syphilis displays itself, is now generally admitted, notwithstanding the doubts of Mr. Hunter on the subject. It is generally called syphilitic *iritis*, because the inflammatory changes are more conspicuous in the iris; but the remarkable redness of the sclerotic, the great imperfection of sight from the very commencement, and the subsequent opacities of the membrane of the aqueous humour and crystalline lens, prove that all parts of the organ are engaged, and that therefore the practitioner should have his attention directed perhaps more to the retina than to other parts. Whether it is to be looked upon as an accidental inflammation, modified by a peculiar and specific state of the constitution produced by syphilis, or as one of the distinct forms in which the venereal disease displays itself, may perhaps admit of doubt; but that it is different from other forms of inflammation in its nature, symptoms, and consequences, can scarcely be questioned. The place it occupies in the order in which secondary symptoms appear has not been unequivocally determined, and it not very uncommonly occurs unaccompanied or preceded by any of them. Mr. Lawrence, in his work on Venereal Diseases of the Eye, says, that "although sometimes occurring alone, it is more commonly accompanied by other secondary symptoms, such as eruptions, ulceration of the throat and mouth, pains of the limbs, and swellings of the periosteum. It is seen in conjunction with papular, scaly, tubercular, and pustular eruptions. As it belongs to the earlier class of secondary syphilitic affections, it sometimes shows itself like the other symptoms of that class before the primary disorder is cured." Mr Carmichael, in his Clinical Lectures on Veneral Diseases, published in this journal in 1840, says, that "though this formidable affection is not confined to the papular disease, yet for one instance we meet with in practice connected with the symptoms of the other forms, we at least find twenty connected with this." Mr. Mackenzie, in his work on Diseases of the Eye, observes, that "the local secondary symptoms with which he has most frequently found syphilitic iritis associated, have been pustular, papular, and scaly eruptions on the face and over the body, and next to these sore throat. The pustules on the face, which he has met with as attendants on syphilitic iritis, have frequently been large, hard, and seated so deeply in the skin as almost to deserve the name of tubercles. The scaly eruptions on the face have occasionally presented an approach to the areolar form of lepra. Over the body, again, where the eruption has generally been of a more acute character, the appearance has been that of numerous circular elevated spots of a brownish-red colour, about the size of a split pea, ending in a desquamation of successive thin pellicles of

cuticle. Mr. Hewson, in his excellent treatise on "Ophthalmia accompanying the secondary forms of Lues Venerea," makes the following observations on this subject:—

"It is only when lues venerea has advanced to its secondary stages, and more or less contaminated the system, that the eye is susceptible of this disease; an half-cured, indolent chancre or bubo may be present with it, but some degree of constitutional taint is necessary to its production.

"Some facts have led me to believe, that where the constitutional symptoms are most distinctly and strongly marked, and are attended with most general disturbance, in the same proportion will these attending the ophthalmia be violent and severe; and, on the other hand, where the former are few and feebly developed, so will the latter be slow and insidious in its progress, and mild in its symptoms. I have also pretty generally remarked that, in those cases in which no mercury has been used in the primary stages, or previous to the occurrence of the ophthalmia, this has appeared in its severest and most exasperated form; whereas, with those in which this remedy has to a certain extent been employed, the contrary has been observed. Thus, among the cases noted as having the ophthalmia in the former state, many have been nurses who were infected by suckling pocky children: to these the disease is generally communicated in a manner unexpected, and its nature not being known, is allowed to proceed to its secondary stages without the intervention of its proper remedy. Women, also, who have been disordered by their husbands, have been placed under similar circumstances, and similar results generally attend their cases. On the other hand, the patients with whom the ophthalmic symptoms have manifested most mildness and indolence, who are by far the majority, have been those whose previous treatment has been conducted on what is called the alternative plan—by pills, and without confinement, I must, however, acknowledge, that the worst and most unfortunate cases have been preceded by an irregular, inefficient, and protracted use of mercury.

"It would lead me out of my limits, and would be scarcely possible to examine and enter on a minute description of all the varieties and forms of constitutional symptoms, which in different cases will be found to accompany the ophthalmia, for this would embrace a history nearly of the whole venereal disease; it will, however, be necessary to take a short view of the most frequent and remarkable.

"Some species of eruption most commonly attends it, and this is usually either of the papular or scaly kind. We are not, however, to credit the statement of a recent speculative writer, who would have us believe that it is only joined with the papular. Though appearing most frequently in company with the eruptions I have mentioned, it is not necessarily connected with these or any of the eruptive symptoms, which in such endless variety indicate a constitutional taint. It may be associated with any general symptom; or, as it is distinct from, and independent of all, so it may exist alone. When the characters of any of the eruptions, of which I have now spoken, are sufficiently distinctive of their morbid origin, this concurrence will be decisive of the nature of the ophthalmia, if any previous doubt exists respecting it; but when these are faint and obscure, other circumstances of the case should be looked into: we must examine into the present and previous state of the patient's health, the time he had received any venereal infection, the treatment that had been employed, and the occurrence or not of any succeeding symptom.

"If, in conjunction with some suspicious appearance about the skin, we observe him pale and emaciated; that his health and strength have been for some time on the decline; that he is less equal to his usual bodily exertions; that he complains of pains about his limbs and joints, particularly at night, together with nocturnal perspirations; that at some recent period, generally within the twelvemonth, he contracted venereal symptoms, in the treatment of which there appears something faulty or objectionable; we have streng grounds for concluding the case to be syphilitic.

"If the skin is free from any symptom to which we can attach suspicion, we are next to examine into the state of the throat, which is very frequently affected at the same time with the eye. We shall here often find one or more ulcers, or a greater or less degree of excoriation, or irritation, either actually present with, or immediately preceding, the ophthalmia; and in some instances the transition of the disease from the throat to the eye has been remarkably rapid, a day or two only intervening between its disappearance from one and its seizing on the other. As the symptoms about the throat are often of an extremely dubious character, we can seldom solely rest our judgment on them; but must, as has been observed above, take our view of the case from an inquiry into the other circumstances attending it.

"Besides the symptoms now enumerated, there may likewise be discovered, in different parts of the body, morbid cicatrices, blotches, or ulcers; or the patient may have pains and swellings in his joints, on part of the periosteum or bones; and, in short, any symptom, even the latest or the most remote, may be conjoined with the ophthalmia. Not a few cases, however, will offer, in which the ophthalmia is, for the most part solitary; for, like many other symptoms of lues venerea, it may exist alone, and be our only evidence of a diseased state of the system. In one remarkable case, in which the ophthalmia followed the healing of some warty tubercles about the scrotum and folds of the nates, by means of local applications; it was the first and only symptom indicating this effect. And amongst women, also, we shall often find that, in addition to the ophthalmia, the only circumstance leading to a suspicion of the constitution being tainted, is their having had repeated abortions, or still-born children. Under these circumstances, a familiar acquaintance with the characteristic appearances of the ophthalmia will be particularly useful, as by this means the attention will always be directed to such inquiries as will afford the clearest insight into the nature of the case."

In my own practice, I think I may safely say that I more frequently meet with the disease unaccompanied by any eruption or sore throat than otherwise. So much so, that I can only satisfy myself respecting its nature by inquiries as to the previous occurrence of primary sores, and the present existence of nocturnal pains and perspiration, periosteal tenderness, emaciation, and general ill-health. On the changes which take place in the eye, I rely very much for the purpose of diagnosis, as I shall have to explain presently. This discrepancy as to the place iritis occupies in the order of secondary symptoms admits of explanation. Patients labouring under eruptions or sore throat, if attacked by inflammation of the eye, will go to the practitioner most celebrated for the treatment of syphilis, because he naturally suspects they are owing to that disease; but if attacked by iritis alone, he will apply to the person he relies on for the treatment of disease of the eye. Hence the one sees most of his cases with eruptions or sore throat, and the other without them.

As it is desirable, if possible, to distinguish the syphilitic from other forms of inflammation of the eye, and as this often cannot be effected from the history of the case or constitutional symptoms, it becomes necessary to consider carefully, whether or not the changes which take place in the organ itself are peculiar, or different from those which occur in simple, uncomplicated, or idiopathic inflammation. In the first stage of the disease, when the changes in structure and appearance are owing to mere increase of vascularity, it is I believe impossible to pronounce an opinion as to the character of the disease from inspection of the eye; but in what I consider the second stage, the period of adhesion, effusion, and loss of transparency, I think a satisfactory diagnosis may generally be made, especially when the inflammation has been permitted to go on for some time unchecked. The opacity of the membrane of the aqueous humour takes place more frequently, and is more remarkable; the effusions of lymph or purulent matter into or upon the iris is more usual and characteristic; and the adhesions of the pupils to the lens are more rapid and extensive in formation. The opacity of the membrane of the aqueous humour is indeed almost exclusively found in syphilitic iritis. It occurs in that form of inflammation of the eye which is in a great degree confined to the chamber of the aqueous humour, and which is generally observed in delicate females of feeble frame or scrofulous constitution; but seldom, if ever, in the simple idiopathic inflammation of vigorous and healthy men. It is to this opacity I alluded on a former occasion when describing the changes which take place in the membrane of the aqueous humour in consequence of simple inflammation,

and I again noticed it more in detail when enumerating the permanent effects of inflammation. Mr. Wardrop notices it when treating of inflammation of the membrane of the aqueous humour; he says "it is indicated by one or more spots which distinctly denote an opacity of its substance. These do not resemble any of the common form of speck, but have a mottled appearance; and Mr. Hewson describes it in the inflammatory stage, considering it to be a clouded or opaque condition of the aqueous humour itself. He observes, "this humour is always more or less clouded by an opaque fluid which is generally seen floating in the anterior chamber. This prevents a clear view of the iris and pupil, and causes an appearance as if there was an opacity of the cornea." In this I am convinced that he was mistaken, because I believe that the aqueous humour is very seldom, if ever, rendered opaque by effusion of purulent or other matter into it; but on the contrary, when purulent matter is secreted, it does not become diffused or mixed with the natural fluid, but falls down, presenting the peculiar appearance called hypopium. That it appears very like a muddy or clouded state of the aqueous humour I admit, and this is rendered still more deceptive by the circumstance that the opacity seldom occupies the whole of the membrane of the aqueous humour lining the back of the cornea, but is confined to its lower half or two-thirds, leaving the upper part transparent, as if the opaque material had subsided towards the bottom. It is, however, to be observed, that the mottled or speckled appearance is not seen during the inflammatory stage; it is one of the effects or consequences which remain long after the inflammation has subsided. The opacity is at first a diffused, uniform, muddy, or clouded patch resembling, as has been seen effusion into the aqueous humour.

Syphilitic inflammation of the eye, although unaccompanied by any cutaneous eruption, sore throat, or other secondary symptom, may generally be recognized from the greater amount of disease affecting the iris. That the yellow depositions of coagulable lymph or purulent matter already described, may sometimes occur in other forms of inflammation cannot be denied, but that they occur far more frequently in the syphilitic form is equally certain. Whether we call them globules of lymph or abscesses, they are found in their most perfect and characteristic shape and appearance in this species of inflammation; so much so, that when present I hesitate not to predict at first sight that on inquiry the existence of syphilitic disease will be established. These depositions have already been described when treating of the consequences of inflammation in its simple or uncomplicated form; it only remains to add, that the dull-red or light-brown irregular ring surrounding the pupil is perhaps found almost exclusively in the syphilitic species. The greenish-yellow stain, on the other hand, is as often, if not oftener, observed in idiopathic inflammation, or after injury.

These depositions, tubercles, or globules, are described by Mr. Hewson as follows:—

"Likewise, we will have in many cases to attend to a very singular, and, I might add, characteristic symptom to which I have already alluded—namely, the formation of one or more small tubercles on some part of the iris. When these occur, there is always more pain and tenderness felt in the eyeball than usual; they commonly present themselves at or near the pupil, and on that part of it where the morbid process is most active. Now and then they are seen on the surface of the iris, between the pupil and its ciliary attachment: they are found from the size of a large pin's head to that of a small split pea; sometimes there appears but a solitary one, at others we see two or more of them unconnected; but in some cases a number are clustered together, and project into the pupillary space, so as nearly to fill it up, or protrude forward into the anterior chamber; at one time they hang pendulous, at an other they are attached by a broad base; when small, they are of a dark red colour; but when large and prominent, they are more or less white at the apex, while about the base the redness continues. By closely examining them in this latter state, we shall distinctly observe that the inflamed superficial membrane of the iris is reflected over them, and forms their anterior covering; and thus, when these tubercles are small, their covering retains the redness caused by its state of inflammation; but when they are larger and more pointed, it becomes transparent about the apex, where, as happens in a common postule, their whitish contents are visible.

"While in this state, in some rare cases, the tubercle bursts, and its purulent contents are poured into the anterior chamber, thus giving rise to the symptom called hypopium, so common in idiopathic internal ophthalmia. The different circumstances, however, I may here shortly remark, under which this symptom occurs in these respective species of ophthalmia, are, with a little attention, sufficiently manifest; for, in the veneral case, we clearly observe that the matter is deposited into the anterior chamber from the pustular tubercle, which is previously formed and always present; whereas, in the latter instance, we cannot distinguish from what direct source it is produced.

"After the disappearance of these tubercles, we may often discover a fissure of cicatrix in that part of the iris where they have been situated. With regard to their nature, from what I have observed of them, I would conclude that they are either pustular or for the most part formed of a purulent deposition. Having never found them attendant on any other kind of inflammation or morbid action, I have always looked on them as characteristic of venereal ophthalmia."—*Dublin Medical Press.*

PRACTICE OF PHYSIC AND PATHOLOGY.

CASE OF HYDROCEPHALUS IN A CHILD.

By James Edward, M.D., L.R.C.S.E.

As medical attendant on the family of William Boath, residing in this place, I was called upon, in the summer of 1839, to attend one of his children, eight months of age, which, upon examination, I found to be laboring under chronic hydrocephalus—a disease which had carried off two of Boath's children at a former period.

I found the child fretful and peevish, leaning his head alternately on his mother's arm and breast, with a small, irregular pulse. He was restless and disturbed in his sleep. In the course of my attendance on him, he was alternately affected with diarrhœa and constipation of the bowels, the tongue being sometimes clean and at others foul; the face had generally a hectic appearance; the skin was occasionally hot and dry.

I scarified the gums, applied a leech to each temple, and had him occasionally bathed to the middle in warm water. The bowels were rectified as occasion required by aperients or astringents. Cold applications were occasionally applied to the head when it felt very warm, but were discontinued when the temperature was reduced. Blisters were applied to the nape of the neck successively for a considerable time, and latterly these were re-placed by a liniment of croton oil rubbed over the head and neck, which produced an eruption on the latter, but only an erysipelatous blush over the former.

Notwithstanding the continuance of this treatment during a period of six months, the disease gradually gained ground. Convulsions and squinting made their appearance, and I considered that tapping for the evacuation of the effused fluid afforded the only chance of recovery. I determined, therefore, that the operation should be performed, and in the presence of David Murray, M.D., and other assistants, proceeded as follows:—

The child was placed across the knee of Dr. Murray, with his head towards myself, and I applied loosely a starched bandage, the ends of which were given to an assistant, that he might tighten it as the fluid was being evacuated. I then introduced a common hydrocele trocar and canula a little to the right of the lateral angle of the anterior fontanelle, to the depth of about an inch in the direction

of the right lateral ventricle. Having withdrawn the trocar, a reddish fluid was allowed to flow to the amount of ℥viij, when I withdrew the canula, applied a compress on the wound, and tightened the bandage for the thorough support of the cranial bones. A slight oozing of blood took place from the nostril, and continued for twenty-four hours: whether from an accidental wound of any small vessel within the cranium, in the course of the operation, I am unable to say.

Nourishing diet was ordered; aperient medicine when necessary; and the body to be kept comfortably warm. All the former symptoms gradually disappeared, the child recovered his health, and now, after a lapse of seven years, is a fair scholar, and has every faculty good. He appears, however, to be increasing in height more slowly than is usual at his age.—*Edin. Monthly Journal of Med. Sci.*

CURABILITY OF HEPATIC ABSCESSES.

By M. Faucomeau-Dufresne.

(*Read at the Society of Medicine of Paris, May*, 1846.)

The subject of this memoir is interesting, but we can only give the substance of the paper itself. Pus is formed in the liver, either from inflammation beginning in the organ itself, or from metastasis; that from the first cause only is considered here. Suppuration presents itself in this organ under different aspects; infiltration of pus through the whole extent of its structure is very rare, but an example of it was sent me this year by M. Chomel; one or more circumscribed abscesses are much more common. If the abscess be recent and quickly formed, it is thin, like whey, and contains flocculi; in other cases it is thicker, unctuous, of a yellowish, greenish, or whitish colour. If one of the biliary ducts opens into the cavity of the abscess, the colour of the bile is easily recognized, and the matter is particularly viscid; traces of blood may be sometimes discovered in it, giving it the appearance of lees of wine, or chocolate, but this is purely an accidental circumstance, and is not a necessary character of hepatic abscess. The quantity of matter found varies from a single drop to twelve or fifteen pints. There may be but a single abscess, but more generally three or four, and occasionally as many as thirty or forty have been discovered. Usually in size they would contain a small orange in their cavity; several abscesses in the neighbourhood of each other generally communicate; they are often traversed by vessels, not so often impervious as is supposed, for they frequently give way, before obliteration; at first the cavity is lined by a soft membrane, which in time will become a firm thick cyst, intimately connected with the parenchyma of the liver; sometimes no cyst or circumscription can be discerned. When matter forms deep in the substance of the organ, and in large quantity, little can be hoped from the power of nature to effect a cure, the patient gradually sinks under hectic; but if the collection is small he may recover, by its slow absorption, and that of the cyst, which leaves behind a hard fibrous knot, sometimes cretaceous, containing phosphate and carbonate of lime; in numerous investigations which I pursued at La Charité, it must be admitted, that I could not trace the origin of those latter to an obliterated cyst of an abscess; but my friend Dr. Charcellay, Professor of Clinical Medicine at Tours, has satisfied himself that these deposits have been the remains of abscesses. When matter forms near the surface of the liver it may escape externally without getting into the peritoneal cavity; but this is not always a fortunate circumstance. Notwithstanding the adhesions which generally form round these abscesses which tend to come forward externally, many examples have been observed where the matter did get into the peritoneal cavity, and often caused a fatal peritonitis, particularly where it formed at the concave surface of the liver, as was the case with Victor Jacquemont, the traveller. Abscess of the liver has made its way into the substance of the spleen. It has got into the thorax, and a cure was effected in two cases given by Taillard and Morand by operating as for empyema. There are two cases on record where the matter got from the liver into the pericardium, which were of course fatal. The most favourable cases are where the matter escapes directly or indirectly through the walls of the abdomen; sometimes they point at the umbilicus, or between the ribs, or as Portal saw in a subject brought in for dissection, between the lumbar muscles, where the matter insinuated itself along the ribs, even up to the axilla. Schenkins is said to have seen one of those abscesses pointing low in the thigh; it may make its way between the pleura and ribs without perforating the membrane and getting under the superficial muscles of the chest; they sometimes make their escape by the biliary, urinary, or digestive canals, or may get through the substance of the diaphragm, pleura, and lungs into the bronchi, and be thus discharged. After reciting a number of cases, M. F. concludes that abscesses of the liver, even of considerable size, are curable by the *vis medicatrix naturæ*, and that there are sufficient proofs to warrant hopes from the assistance of art in several cases from opening these abscesses.—*Dublin Medical Press.*

CASE OF EXCESSIVE HYPERÆSTHESIA.

By Henry Haines Fox, of Columbia, Penn., in a Letter to Professor Dunglison.

Dear Sir,—The case of general paralysis followed by hyperacusis, in a boy aged 11 years and 9 months, at the time he was first attacked, and concerning which I consulted you last winter, has evidently improved in many respects under the treatment recommended by you; which was, as you will recollect, to avoid as much as possible everything that would tend to irritate, or aggravate him in any respect, mentally or corporally, and to trust to the recuperative powers of the system.

As the case is a singular one, and may interest you, I will give you a brief history of it from the commencement. The first thing that attracted the attention of his parents was a hard rough cough, which occurred in January, 1844. He had, however, complained occasionally of wandering pains in his shoulders, with slight weakness of his limbs upon rising from bed in the morning, for some months previous to that time, but these soon passed away. The cough became gradually worse, accompanied with pains and soreness in his teeth, mouth and throat; until the latter part of February, the coughing was almost incessant, especially in the day time, although not attended with any expectoration. At this time a physician was called in, who pronounced the disease to be inflammation of the lungs, and treated it accordingly; he did not, however, order the patient to lose blood. After the application of the second blister to his breast, the cough left him entirely, and the physician ceased to visit him. It was not long, however, before he began to complain again of his jaws and throat, so that it was with difficulty that they could prevail on him to take nourishment, from the pain and difficulty attending deglutition. From this time he began to lose strength, and became very costive, having no evacuation for several days; but by repeated injections they succeeded in procuring one. After the first enema he wholly lost the use of his limbs, and has not been able to help himself in the least up to the present period. After the second enema he lost all control over his eyelids, for several days, but it has since partially returned to him. If requested to move them when open, thy almost invariably closed in an instant: this condition continued for a period of several months, but he gradually recovered, so that now they are under the influence of the will as well as before his illness. About the first of April, 1844, he began to complain of his head, whenever he was moved, and in a short time his parents were unable to move him or change his position in bed. Owing to his weakened and prostrated condition, they have been unable to ascertain whether there is tenderness along the spine, as the least movement or change of position is attended with the most alarming symptoms; the last time his bedclothes were changed he remained senseless—perfectly unconscious of everything—for a period of two hours. It was in April that he began to complain of noise affecting him; and the hyperæsthesia of the organ of hearing soon became so great, that the barking of a dog outside the house would throw him into an insensible state for minutes. Although his ears were well filled with cotton, to prevent as much as possible the im-

mediate contact of noise with the super-sensitive organ, such was his impressible condition that his father was compelled to relinquish farming for several months, being unable to thrash his grain, or drive his team past the house.

In the latter part of summer, he experienced stitches in the posterior part of his head, which were followed by pain in the back, shooting up to the head; but these finally left him, so that at the present time he does not complain of any. His reason seems to have become impaired with the increase of the malady, especially on some points, though not on all—often conversing for hours without showing any impairment of the mental faculties whatever. His memory has remained perfect throughout the illness; he recollects apparently everything that has occurred, but his temper is greatly changed; he often breaks out into violent rage, and, at the same time, makes use of language which he never did before his sickness. His shyness, or dread of strangers, commenced about the time he lost the use of his limbs. He cannot be prevailed upon by any of the family to permit many of his near relatives to see him, but above all he objects to physicians; for whom he has the greatest dread imaginable. For more than a year anorexia was great, so that it was often difficult to prevail on him to take the least quantity of nourishment; consequently he became greatly emaciated; of late, however, his appetite has improved greatly—he has become more fleshy, and has evidently grown within the last nine months. He has had no medical treatment since his first attack: upon this point his father—in a letter dated February 19th, 1845—speaks thus: "I sincerely believe it was impossible to have resorted to any active means since last May, owing to his great prostration and utter abhorrence of all physicians. I have been expecting every day would be his last for some months."

Since last April the super-sensitiveness of the auditory nerve has been gradually diminishing, until it has become nearly natural; and he now seldom complains of noise disturbing him, unless it is very loud. His appetite has returned, so that he takes a good share of nutritious aliment; consequently his nutrition has greatly improved, and he has evidently grown in stature within the last nine months. Although still unable to exert any control over his limbs or body when awake, it has been observed, of late, that he does change their position in his sleep. These are among the more marked changes which have occurred since last winter.—*Medical Examiner.*

MATERIA MEDICA AND PHARMACY.

ON THE EFFECTS OF EXTRACT OF CONIUM MACULATUM.

By Hosea Fountain, M.D., of Somers, Westchester co., New York.

I was much interested in reading an article in the number of the *American Journal of the Medical Sciences* for July last, from the pen of Dr Earle of New York, on the effects of the extract of conium maculatum. As I have been in the habit of prescribing this remedy occasionally, and always observing marked effects from its use, I was much surprised at the slight results obtained from the large quantities mentioned by your correspondent. His communication describes the symptoms arising from the internal use of the drug as usually found, I suppose, in the shops, which were so slight and transitory, that we may safely conclude that the medicine is either inert, and should, therefore, be discarded from the materia medica, or that the extract experimented with was improperly prepared, or had lost its virtue by age or some other cause.

That conium is an active agent, few who have witnessed the effects of a well-prepared *fresh* extract will be disposed to doubt; and that it is useful in disease must be admitted, when such troublesome complaints as chronic affections of the liver, habitual costiveness, jaundice, &c., are relieved, and often cured by this remedy alone.

To show that conium does act with some energy on the system in less quantities than taken by Dr. Earle, I will describe the effects of a single dose on myself. The extract was prepared from the fruit, or seeds of the plant, with no other care than that the infusion was not at any time allowed to reach the boiling point. When of a syrupy consistence, the evaporation was finished in shallow pans, in the open air.

Fearing, from its dark color, it had been injured in its preparation, I swallowed about twelve grains, to test its activity, and quietly awaited its effects. Half an hour passed away without any alteration in my feelings, when supposing the medicine worthless, I threw part of it, from which I was preparing some pills, in the street, and started on my daily ride. In a few minutes, however, I observed a dimness of vision, with bright points scintillating, or rather quickly moving in the distance. This caused me to turn from side to side to notice them: and from this cause, I suppose, I found myself reeling in the saddle. There was no vertigo or unpleasant sensation about the head to produce this effect, save a slight feeling of lightness. Very soon, a numb, pricking sensation was felt in the fingers, extending gradually to the elbows, producing a stiffness of the muscles of the parts, making it difficult to move the forearm and hand. In a few minutes the same sensation was observed in the feet, creeping slowly upward, until it reached the upper part of the thigh. The eyes now began to feel uncomfortable, causing me to brush them frequently, to clear apparent obstructions from the lids. The pulse was soft and feeble, but not more frequent than usual. In dismounting, about an hour from the commencement of the symptoms, I found so much difficulty in walking as to require assistance to reach the house, the inferior extremities appearing nearly paralyzed. So little pain or distress was felt, however, that I laughed heartily at the predicament I had so unwittingly placed myself in. Feeling anxious to get rid of this annoyance, as well as from the solicitude of those around me, I tried what effects smoking of tobacco would produce. I had been in the habit of using this luxury occasionally, and at this time had a strong desire for it. Whether from this cause, or from rest and composure, I soon felt very much relieved. Vision became clearer; the limbs less troublesome; and whilst sitting, little or no apparent effects of the poison remained. On rising, however, the inferior extremities persisted in their unwillingness to move; but much less so than before. The whole day passed away without being entirely rid of these feelings, and it was not until I enjoyed my usual sleep that perfect vision was restored. I will observe, that the intellect appeared unaffected, the bowels and kidneys were not disturbed, neither was any soporific effect produced. The action appeared to be confined to the brain, exhausting it of blood, and dimishing its energy. Hence the partial paralysis, which a few more grains would, perhaps, have rendered complete. The aberration of vision arose from the same cause: and convulsions from exhaustion, as from loss of blood, would probably have followed, had a larger quantity been taken.

As I quote this case from memory, I cannot speak positively as to the lapse of time between the taking of the extract and its effects; otherwise this statement is as correct as one can be expected to describe from one's own experience and feelings.

In this instance, it will be observed that a small quantity compared with what Dr. Earle took, produced symptoms of the poisoning of hemlock; so much so, that I could not be persuaded to experiment on myself with a larger quantity of the same extract. A single pill of this, of three or four grains, produced very unpleasant effects on a young man af-

fected with chronic peritonitis. He described his feelings as a snapping and crackling of the eyes with a drooping of the lids, and darkness before him—this was attended with a feeling of great weakness generally. An aged lady, affected with chronic inflammation of the liver, attended with constipation and indigestion, as well as extreme vigilance, the pulse frequent and tongue coated, was put under the use of this remedy. She took four grains of the extract thrice daily. On the second day, she complained very much of soreness of the globes of the eyes, and a feeling of weight and tightness over the eyebrows, and dimness of vision. The pulse became softer and less frequent; in a few days the bowels moved naturally, and she was soon able to enjoy calm and refreshing sleep. The disease, in this case, was of more than twenty years duration; and as no other medicine was given her at this time, the relief must be attributed entirely to the conium.

I mention these cases to show, that it was not from any peculiarity of constitution that caused the small quantity taken to produce the effects as described on myself. And although the seeds of the plant furnish the most active extract, I have known ten grains of that prepared from the fresh leaves cause very severe effects.

From these cases, I think we can safely conclude, that the extract of conium is an active remedy; and that a few grains of a well prepared *fresh* article are sufficient to prove its nature and efficacy in disease. As the plant grows luxuriantly through the country, would it not be better for physicians to obtain the fruit or fresh leaves, and prepare an extract that would not deceive them, rather than prescribe hundreds of dollars' worth of such inert preparations as those experimented with by Dr. Earle? At least, should not druggists be industrious enough to prepare it in such a manner as to insure an uniform effect from its administration? —*Amer. Jour. of Med. Sci.*

MIDWIFERY.

THE USE OF INSTRUMENTS IN CHILDBIRTH.

(To the Editor of Boston Medical and Surgical Journal.)

Sir,—I noticed in your Journal of the 21st inst., a communication of Dr. Comstock, in which he puts some interrogatories to the profession. The first is, "What proportion of cases of midwifery, that have fallen within your practice, have required instrumental aid; and of those, what have been delivered by the forceps?" In order that I may answer this question to the understanding of your readers, it will be necessary to state how many cases of midwifery have been under my care. I have attended twelve hundred cases of midwifery at the full period of utero-gestation; of these cases two have had the forceps applied, and in one craniotomy has been performed. In answer to the second question, I would say that the application of the forceps in one of the cases was unnecessary, the powers of the woman not flagging at all; and the consulting physician acknowledging that the labour would take place in two hours by the unaided efforts of nature. To the third question I can only say that I have never seen a woman injured from a too long retention of the head; whereas, in the forceps cases it was a long time before the parts recovered their tone. To the fourth interrogatory—"Have you ever seen a ruptured uterus from the use of ergot?" I answer that I have not, nor any other injury to the woman. There has occurred one case of ruptured uterus in the twelve hundred, and that took place from a hydrocephalous head without any irritation of the uterus by artificial means. The woman lived four days, and died from peritoneal inflammation. The ergot may often supersede the application of the forceps where there is no disproportion between the head of the child and the pelvis of the mother; but the pains are feeble, and there appears to be a want of muscular power in the uterus. I should have no fear of ergot ever proving injurious to the mother, but to the child it is somewhat hazardous unless there is a long interval between the labour pains. When that is the case, ergot may generally be given with safety to the child.

Of these twelve hundred women, several have had puerperal fever; but one has died of it. One woman died of pleurisy, being attacked with it on the day previous to the labour. By far the greater number of deaths have occurred some months after confinement, from consumption or canker. The proportion of deaths that have taken place from all causes, I have neglected to notice.

Yours respectfully,

E. Woodward.

Quincy, Mass., January, 22, 1846.

[We strongly recommend the above article to the consideration of some of our "Meddlesome Midwifery" brethren. We could probably find some who have used the forceps rather more frequently than E. Woodward of Quincy, Mass.]

MEDICAL JURISPRUDENCE.

UPON THE POSSIBILITY OF PRODUCING AFTER DEATH SOME OF THE CHARACTERS OF BURNS OCCURRING DURING LIFE.

By M. Champaillon,

Professor at the Military Hospital, Val-de-Grace.

To determine whether a wound was inflicted during life or after death, is sometimes attended with great difficulties, and involves the medical witness in considerable perplexities frequently. The essential point to set out from in such investigations should be an accurate knowledge of these phenomena which characterize the vital reaction upon the different tissues. The appearance of burns varies according to the agent—that is, whether it is caused by fire or some chemical substance; in the latter case, the appearances differ with the nature of the substance inflicting the injury. It is often necessary in legal medicine to form a precise opinion as to the intensity of burns, which is drawn simply from the redness of the surrounding skin or its greater or less carbonization. But between those there are intermediate shades which show themselves under the appearance of phlyctenæ and escars either superficial or deep. The question presents itself—Can these signs which are given as characteristic of burns taking place during life, be produced after death? M. Léguy gave it as his opinion before the Tribunal in a particular case that a burn which took place before death, may be distinguished from one after death by the appearance of a red circle surrounding the part in the former; M. Accarie, on the other hand, that this distinction was of no value whatever, as the redness would disappear after death, as the redness of erysipelas did. It has been asserted that the presence of *bullæ* indicates to a certainty that the burn had taken place during life;—but M. Leuret discovered by chance that heat applied to a part of the surface of the dead body can produce these blisters, provided the person had died anasarcous, and from a number of experiments he made subsequently, he proved the possibility beyond a doubt in such subjects, but was unable to produce them where there had been no anasarca before death. This should be recorded, but something more than the isolated fact would be required before rigorous and satisfactory conclusions could be safely drawn as to the main question. M. Champaillon has endeavoured to supply some deficiencies in our means of arriving at the truth. It is not, so to speak, by

the immediate contact of a heated body with an anasarcous part that blisters can be raised in a dead body—in such a case the cuticle may indeed be elevated at the part, but it will be by air, and never will contain a liquid; the number and size of the ampullæ appear to him to depend upon the quantity of combustible employed, the distance of the heated body from the skin, and the duration and intensity of its rays. If a metallic ball heated to redness, or a metallic vessel filled with boiling water, be placed within an inch or two from the anasarcous limb of a dead body, no vesications will be produced, because the heat is not furnished as quickly as it is dissipated; but if, on the contrary, the body be placed at a convenient distance from a fire, the rays of heat from which continue for some time of the same intensity, phlyctenæ will constantly be produced. By known physical laws, when the heat has diminished the atmospheric pressure on some spot of the trunk or limbs, the serous fluids flow to the part, raise the epidermis, and form collections perfectly like the phlyctenæ which characterize burns in the living body. In proof of this theory of the phenomenon, take a cupping-glass of the proper size, apply it on an œdematous spot of a dead body, and exhaust its air, numerous vesicles filled with reddish serum will be immediately produced. The removal of the atmospheric pressure from an œdematous part in a dead body, whether by heat or other means, seems the only cause of the production of these appearances; but the vesications are produced in a different way in the living body—are in fact the result of the organic sensibility of the part. M. Leuret remarked that the serum was bloody in his observations, but the red colour is rare, for in M. C.'s experiments the serum was red in but six out of twenty-two instances. In experiments on dead bodies the blisterings do not appear suddenly in general—it takes from two to six hours for their appearance, but no doubt the time might be shortened by increasing the degree of heat. M. Champauillon having only experimented on young subjects, cannot say but modifications might be found in the results from age, sex, &c. In no cases has he remarked any difference to occur from the experiments being made immediately after death, or during cadaverous rigidity, or when putrefaction has commenced; the productions of the vesications did not seem either favoured or retarded by these conditions of the subject. Christison has laid it down as an established principle that a permanent red circle round the part indicates that the burn took place during life, and it has become therefore a guide in evidence, but M. C.'s observations are far from sanctioning the value of this test, as an appearance almost identical can be produced in the dead body, and in fact every experiment in which vesications were produced, but one, the red line, regularly indented, was also produced, and is considered by him accordingly as necessarily connected with the vesications. In the dead as in the living body the red line has the same superficial appearance, but an incision through the skin distinguishes them from each other beyond any doubt—in the one case, it is found a simple injection of the cutaneous capillaries, perfectly resembling the vascular ramifications on the intestines of persons killed by drowning—in the second case, the blood is found extravasated among the tissues, and incorporated with them; the inflammation in the one is marked by an opaque homogeneous layer, but in the other there could have been no vital reaction to cause it. When the cuticle is removed from the vesications caused by heat to the anasarcous limb of a dead body, the cutis is found converted into a white mass, its surface gluey, and a total absence of injected vessels—is this the case with burns occurring during life? M. C. had occasion to examine the bodies of four artillery-men covered with these vesications, who had been killed by the explosion of a mine; the cutis beneath these vesicles continued to present a high degree of inflammatory redness which could not be effaced by refrigerants. From all that has been said it appears demonstrable that whether the burn is caused before or after death, the *appearances* are precisely the same; that it is not possible to distinguish them except by a careful dissection of the skin; that even dissection furnishes results too inconstant and subtle to be much depended on; and finally, that Christison's diagnosis is worth nothing when the subject for examination is anasarcous.—*Annales d' Hygiène Publique.*

THE HYDROPATHIC SYSTEM.

IMPORTANT CORONER'S INQUEST.

Friday the investigation was concluded before Mr. W. Payne, concerning the death of Mr. Richard Dresser, who was alleged to have died from the effects of improper treatment received at the hydropathic establishment of Dr. Ellis, Sudbroke-park, near Petersham.

The inquiry excited the most intense interest, and the jury-room was densely crowded by the professors of the hydropathic system, and other members of the faculty, amongst whom were observed Dr. Schnitch, the celebrated German professor of hydropathy, Dr. Carié, Mr. B. Rotch, the county Magistrate, &c. Dr. Ellis was also in attendance, supported by Mr. Prendergast, the barrister, and Mr. Hance, solicitor. Mr. Jones, solicitor, of Bucklersbury, attended on behalf of the friends of the deceased.

The evidence taken prior to the adjournment went to show that the deceased had for the last three weeks been subject, as he considered, to rheumatism and sciatica. He was very ill, and expressed himself much in favour of the hydropathic system of medical treatment, and in consequence, his wife was induced to write to Dr. Ellis, who keeps a hydropathic establishment at Sudbroke Park, Petersham, Surrey. The deceased went to Dr. Ellis's establishment on Friday week last, and was there subjected to the water system of treatment, under which he died on the following Tuesday.

John Maynard was first called.—He said, I am bath attendant at Dr. Ellis's establishment, near Petersham. I recollect seeing the deceased Mr. Dresser, from the Friday evening till the Tuesday morning. When he came on Friday evening I saw him, and he appeared very ill. I saw nothing done for him before he was put to bed. On Saturday morning he had a bath at a temperature of 65. He was in the bath for 90 seconds. He was attended by Dr. Ellis during the day, but I saw nothing more done for him that day. I carried water into the room, both hot and cold, during the day, two or three times, but I don't know what was done with it by Dr. Ellis to Mr. Dresser. There was about half a gallon of cold and half a gallon of hot water each night. On Sunday morning I prepared deceased a bath as before, and I also carried in hot and cold water. When I carried water in, Mr. Dresser was lying on the bed in blankets. After Mr. Dresser had the bath on Sunday morning, he went out and walked in the pleasure ground with me for about five minutes, and afterwards with Dr. Ellis. He then went to breakfast with other patients in the public room. He afterwards lay down with the blankets over him, and I carried in water as before. I saw Mrs. Dresser there on the Sunday. On Monday morning he again had a bath, and tapioca and bread and butter as nourishment during the day. I carried no water in on Monday until the evening. A bath might have been given to Mr. Dresser without my knowledge. I made no observation on Monday evening about the perspiration in which deceased had previously been having stopped. I did not see Mrs. Dresser in the room on Monday night, or make such an observation to her. I saw deceased on Tuesday morning, and I believe that the Doctor sat up with him all Monday night. He had no bath on the Tuesday morning. It was about 7 o'clock in the morning, and he was lying on the bed. I did not see him afterwards alive. I am not aware that he had any other food than the tapioca and bread and butter I have spoken of. One of the bathmen was ill on Monday, and the "boots" attended for him.

By Mr. Jones—The "boots" was in deceased's room on Monday evening, and might have taken a bath without my knowledge. There are no written minutes of the temperature of the baths, but there are written orders as to the heat hung up in the patient's rooms. We try the heat with a thermometer.

By Mr. Prendergast—On the Sunday I took some castor oil to deceased by order of the Doctor. The deceased took all the food he desired.

By a Juror—We changed the temperature of the water frequently, according to the Doctor's orders. I never took the cold water without the hot.

Mr. Charles Waterworth, examined—I reside in Bengal place, New Kent-road, and am a surgeon. I have known the deceased, Mr. Dresser, for six or seven years. During that period his general state of health has been good. I attended him for rheumatism four years ago, occasionally in the stomach. I last attended him for jaundice and stomach derangement in March last, which arose from impediment to a natural flow of bile into the bowels. There was not disease of the liver. I have not seen him since the middle of April, when I attended the *post mortem* examination of the deceased's body. There was nothing to account for death but the congested state of the lungs and the heart. Mr. Hicks was present with me, and we both agreed at the time as to the cause of death.

The Coroner here handed the paper, purporting to be the cause of death, to the witness, which Dr. Ellis had given to the deceased's cousin, and asked if he had read it?

Witness—Yes, I have.

The Coroner—Does that statement agree with what was ascertained on a *post mortem* examination?

Witness—Not in any one point.

The Coroner again read the paper in question, and called the attention of the witness to various symptoms the deceased was stated therein to have exhibited by Dr. Ellis, the whole of which he contradicted from his own observation of deceased.

Evidence resumed—From reading this paper I have no doubt the deceased was treated for disease of the liver and its consequences. Deceased was a man of very feeble power as regarded the action of the heart. I don't think there could have been any reason for treating him for diseased liver. The only judgment I can form of what disease deceased was labouring under from that report is difficulty of breathing. Had the liver of the deceased been diseased as described, nothing could more rapidly have destroyed his life than the hydropathic system. The placing him in baths would peril the life of a patient labouring under disease of the liver, particularly with suppuration, by lowering the power of the system.

By the Coroner—I attribute the congestion of the lungs and heart of deceased to the external application of cold.

By Mr. Prendergast—A depression of animal powers—depression of the action of the heart, may cause congestion of lungs and heart, but not to this extent. The liver was not congested, although Mr. Hicks thought so; but I can say I hardly ever saw a more healthy liver in my life. It is a falsehood for any one to say that this investigation has been induced by me. I never suggested to the widow to have her husband's body opened.

Mr. Prendergast here proceeded to cross-examine the witness, and Mr. Waterworth loudly complained against the course of proceeding.

The Coroner interfered, and remarked, that as Mr. Prendergast was attending in behalf of a person whose position might be affected by the inquiry, it would, perhaps, be necessary to answer all the questions put by that gentleman.

Mr. Waterworth was then cross-examined at great length, as to conversations he had with Mrs. Dresser, since death, and as to the *post mortem* examination.

Mr. Prendergast again commenced calling out to him—"Come, Mr. Medical man, do you mean to answer that?"

Mr. Waterworth again appealed to the coroner for protection.

The Coroner—I cannot, Mr. Prendergast, allow you to insult a respectable gentleman, under examination in this court, by using such terms as—"Come, Mr. Medical-man;" do behave as a gentleman, Sir.

Mr. Prendergast (with great warmth)—Oh, you say that to me, do you?

The Coroner—Yes, and if there is a repetition of the conduct, I shall have you removed from the court. I am always willing to give every license to professional men to discharge their onerous duties before me as coroner, but I again say if there is a repetition of such conduct as yours, Mr. Prendergast, I must order your removal. (This declaration of the coroner was received with a loud burst of approbation from all present, which was with some difficulty silenced.)

Cross-examination continued—I think any baths in deceased's case, whether hot, or cold, or tepid, to have been injurious. I think that warm water at 85 would, improperly used, produce congestion. It would depend upon how long it was applied. I think it must be the opinion of every well-educated medical man, that tepid water improperly applied would produce congestion.

The Coroner said, as far as he was concerned, all the witnesses had been examined; if, however, Mr. Prendergast chose to call any on behalf of Dr. Ellis, he was quite at liberty to do so.

Mr. Prendergast said he did not know if it was necessary to call any one, but he claimed his right to address the jury, as there was a serious charge against Dr. Ellis, which might affect him criminally, and he wished to show the law as it affected medical men, who were not responsible for the death of a patient under them when they were striving to do him good.

The Coroner said that was the argument adduced in the case of St. John Long, and the judges overruled it.

After a long discussion between the coroner and the learned council, the former decided not to hear any address, as it was irregular.

Mr. Prendergast then desired to offer evidence as to Dr. Ellis's competency.

The Coroner said he would hear any one called to prove that Dr. Ellis was a really qualified practitioner in the eye of the law.

Mr. Prendergast said it mattered not whether Dr. Ellis belonged to a certain College of Surgeons or not, he could practice legally without that. The learned counsel not calling any witness on this point.

The Coroner proceeded to sum up the case to the Jury. He observed, that in the case of Mr. St. John Long, which had been previously alluded to, the judges had laid down the law in a very clear and perspicuous manner, as did also the Lord Chief Justice, who was then Attorney-General, and conducted the prosecution, That learned authority argued, as in the case of St. John Long, that although there might be no malice aforethought, if he proved the defendant had applied himself to the treatment of a case of which he knew nothing as to its proper treatment, and that he administered a liquid or medicine of the constitution of which he had no knowledge, he was clearly guilty of manslaughter. The judges in the same case laid it down that, whether a man was a legally qualified practitioner or not, went for nothing. The question was, whether the treatment adopted was a rash and reckless treatment, and which had resulted in the death of the patient, or whether it was such treatment as might, under any other circumstances, have ended in fatal results. Now, in the present instance, they had no evidence that Dr. Ellis was not a duly qualified practitioner, and, therefore, the sole question for the Jury to consider was whether, in the present case, he had acted towards the patient in a *bonâ fide* manner, or had acted in his treatment with a gross degree of recklessness or rashness and incaution, and thus caused death to ensue. If the Jury viewed the case as one of *bonâ fide* treatment, then they were bound to acquit Dr. Ellis of all blame; but if, on the contrary, they considered he had acted with rashness, then their verdict would be one of manslaughter.

About half-past 6 o'clock, the Jury retired to consider their verdict, and after about 20 minutes' absence came into court, when

The Foreman said the Jury were of opinion "that Mr. R. Dresser had lost his life by the improper treatment he received in the hydropathic establishment at Sudbrooke-park."

The Coroner—Do you say from gross rashness, or from causes over which there was no control? You must either state that, or that it was in consequence of the rash treatment he received there. I must get the Jury to retire again and amend their verdict.

The Jury again retired for about a quarter of an hour, and on their return

The Foreman said—We have unanimously agreed "that Mr. Dresser's death resulted from the rash treatment he received under Dr. Ellis's care. We are unanimous in a verdict of manslaughter against Dr. Ellis."

The Coroner then bound over Dr. Ellis in the sum of £500, and two of his friends, Mr. John Cassell, of St. John's Villas, St. John's Wood, and Mr. David Coote, in the sum of £250 each, as his securities that the Doctor should appear and take his trial at the next session of the Central Criminal Court on the charge of manslaughter.

Mr. Prendergast having thanked the Coroner for the way in which he had conducted the inquiry, the proceedings terminated.—*Cork Constitution.*

MISCELLANEOUS.

MESMERISM.

From a letter published in a Dublin paper, it appears that the £100 note deposited for six months in the bank of Messrs Ball and Co., which was, according to the terms of the advertisement in the public papers, "to become the property of any person who, without opening the envelope in which it was contained, should describe every particular respecting the note—such as its number, its date, the bank at which it was payable, &c., and who should read three English words, plainly written on a slip of paper, which was contained in the same envelope with the note," has not been awarded. The six months expired on the 31st March, but the time was extended to the 18th of April, to meet the convenience of a lady, a professor of mesmerism, and the authoress of an ingenious book on the subject, who arrived from London in the beginning of the month, and who expressed a wish to have some time longer to prepare her *clairvoyance* for the test. Six months and seventeen days having expired, and no person having appeared at the bank to examine the envelope, it was opened on the 18th instant, in the presence of Messrs. Ball and Doyne, and one or two other persons connected with the establishment. The note proved to be a printed cheque issued by the house of Messrs. Ball and Co., for £100, payable to Œdipus or bearer, and dated the 1st of October, 1845. The English words (written on a separate slip of paper) were, "To Œdipus alone." Although no person applied at the bank to inspect the envelope containing the note, some communications were received from different parts of England, and one from America, (but none from Ireland,) containing mesmeric revelations respecting the number of the note; and one letter (from Plymouth), enclosed a picture, or (intended) *fac simile* of it. It is unnecessary to add, that these mesmerically-inspired persons were mistaken in every particular.—*Provincial Medical and Surgical Journal.*

CONCOURS FOR THE PROFESSORSHIP OF ANATOMY IN THE FACULTY OF MEDICINE OF PARIS.

The concours for the appointment of the successor of Breschet to the chair of anatomy in the School of Medicine and Surgery of Paris has been completed. The exercises which the candidates have to undergo are five in number; 1. A written essay, the subject being the same for all the candidates, which must be composed in five hours, without any extraneous aid whatever, and subsequently read in public. 2. An oral lecture, one hour long, on an appointed subject, after twenty-four hours' preparation. 3. An oral lecture on an appointed subject, after three hours preparation, without any extraneous aid. 4. An anatomical dissection or preparation, to be made without assistance, and a public lecture thereon. 5. A thesis to be supported by argument. The subject of all these exercises is appointed by lot. The credit given to each candidate for what is termed "*anterior titles*"—that is to say, his previous scientific and practical labors, is not determined until the foregoing exercises have been completed.

"The subject of the written essay on the present occasion was the *Skin*.

"The following is a list of the subjects of each lecture, with the name of the candidates to whom they were respectively allotted:—M. Dumeril—the secreting organs in general; the liver. M. Chaissagnac—the organ of hearing; the liver. M. Bourgery—the eye; articulation of the head with the spine. M. Despretz—the digestive organs in general; articulation of the head with the spine. M. Gosselin—the cerebro-spinal nervous centres; testicle, vas deferens, and vesicula seminalis. M. Giraldes—comparison of the upper and the lower extremity; the bladder. M. Beclard—the hand; the appendages of the uterus. M. Denonvillers—the organs of sense compared with each other; the appendages of the uterus; M. Sanson—the respiratory apparatus; the appendages of the uterus.

"The subjects of the theses are:—M. Gosselin—The ganglionary nervous system; its connections with the cerebro-spinal system of nerves. M. Dumeril—the evolution of the fœtus. M. Denonvilliers—comparison of the two muscular systems. M. Sanson—the articulations in general. M. Giraldes—How far comparative anatomy is useful in the study of human anatomy. M. Chaissagnac—the mucous membranes. M. Despretz—on the value of microscopic researches in anatomy. M. Beclard—the cartilaginous system. M. Bourgery—the appendages of the fœtus and their development.—[M. Denonvilliers was the successful candidate.—Ed.]—*New York Journal of Medicine.*

CONCOURS FOR THE CHAIR OF EXTERNAL PATHOLOGY (SURGERY) AT MONTPELLIER.

The following were the exercises performed by the candidates. The subject of the written essay was, 'Pass in review the principal divisions of external pathology, to shew theoretically the relations between medicine and surgery.'

"In a lecture, after twenty-four hours' preparation, M. Guissac considered *Cysts in general;* M. Boyer, *Scrofula in a surgical point of view;* and M. Alquie, *Tumours in general.*

"M. Guissac's thesis was, *On the improvements in surgery due to the progress of pathological anatomy.* M. Boyers's, *What is due to nature and what to art in the cure of surgical diseases?* M. Alquie's—*Appreciate the labors of the Academy of Surgery.*

"All the candidates had to deliver an extemporaneous lecture on the same subject, viz.—*On foreign bodies in the air-passage.*

"M. Boyer was unanimously elected Professor of Surgery, and the jury passed a warm eulogium in the most complimentary terms on M. Alquie."—*Gazette Med. de Paris.*

MEDICAL INSTITUTIONS OF ITALY.

Dr. Morland in a letter to the Editor of the *Boston Medical and Surgical Journal*, published in the last number of that journal, thus observe with reference to the Medical Institutions of Italy:—

Italy certainly possesses many very noble institutions for the poor and the sick—and was, during the middle ages, far in advance of the rest of Europe. At Naples, the "Royal Poor House" should be mentioned as an institution of great usefulness and merit. It was commenced in 1751, and now is an immense building; one side is allotted to females, and the other to males. At present, between 5 and 6000 (according to the statements) are maintained and instructed by this establishment; among other things the inmates are taught *surgery.*—The hospital for *Incurables* is capable of containing upwards of 1000 persons; the sick are received from all parts of the kingdom—and foreigners also. There are cliniques also—medicine, surgery, midwifery, an anatomical theatre, &c.

In *Rome*, the hospitals are not so well looking, *internally*, nor, I should think, so well conducted, as in most of the other Italian cities. The small hospital of Benfratelli, containing 80 beds, is much neater and better ventilated than San Spirito, the principal one. The Benfratelli is in the hands of the monks, who perform the services and duties for the sick. The aspect of things was exceedingly *dubious* as to the comfort of the patients. The immense wards of San Spirito are disgustingly dirty and wretchedly ventilated—and, what is worse, they have the most unscientific, *outrageous* arrangement of "*stowing away*" the poor patients in *double tiers—two tiers* on each side of the ward; the heads of patients in tier No. 2. lying at the feet of those in tier No. 1. I have never seen so bad an arrangement in any hospital—nor one so calculated to produce bad effects. More is the shame, too, for this hospital is very richly endowed. The Foundling Hospital and the Lunatic Asylum are also in this building, which, as

you may imagine is immensely large. In the lunatic department the old restraint system is still in use. There are several other hospitals in Rome; indeed, it is the boast there, "that no city in the world devotes so large a sum to institutions of charity, in proportion to the population. But some master's hand is wanted to direct and apply the abundant means. La Consolazione, near the Capitol, is the hospital allotted to *surgical* cases—a good number of these are *stabbing* cases. It is stated that the average number of patients is about 800 annually.

I attempted to enter the Hospital of San Michele, which is very large, *twice*, but was prevented each time: once, because it was the "*sleeping time*;" the other visit, on account of its being fete day. The exclusion of visiters at the time when patients are asleep, is certainly a good idea; and I have often thought that the visits in the Parisian hospitals, made at so early an hour, are decidedly more for the advantage and convenience of the physician and student than that of the *poor patient*, who is often roused from a slumber of great *importance to him*, to respond to the interrogatories of the visiter. Certainly on the score of comfort and likelihood of benefit to patient, the visiting hour as it is with us is far preferable.

San Michele is highly spoken of, and is doubtless worthy of the praise. It contains a house of Industry and of Correction. It is to be trusted that it is cleaner than San Spirito.

Florence, whose admirable and very extensive collection of anatomical models in wax, is so well known to all medical travellers, and indeed *universally* visited, contains, I believe, only two or three hospitals. One of these, Santa Maria Nuova, is worthy of all praise for the remarkably excellent management exhibited. It is the medical school of Florence, and contained, at the time I saw it, 600 patients, having accommodations for 400 more. The cabinet of pathological and anatomical specimens, although small, contained many very good pieces; the skeleton of a child, with the bones of the skull pushed widely apart by hydrocephalic effusion, the head being enormous—I believe larger than any one I have seen; many specimens of excessive distortion of the spinal column; some wax models of tumours, &c. &c. In a small cabinet are preserved the pieces of the human body *petrified* by *Segato*. There were portions of the liver, the brain, the intestines; also the organs of animals. You doubtless have heard of the *table-top*, inlaid with petrified pieces of this nature: it, also, is kept in this cabinet.

The hospital is remarkably airy, neat, well arranged, and has an air of great comfort; the different attendants are exceedingly polite, and every part of the hospital was shown with great readiness, and *pride*, too, as I thought. In the midwifery department are many separate rooms, in which the beds were very clean—the nurses neat and looking quite good-natured. There is a room for delivery, and others for those affected with after troubles. In this department was shown to me a bed different in construction from any I happen to have seen; it has, about one third of the way from its head, a slight elevation (continued, of course to the head); beneath the pelvis an aperture sufficiently large for the issue of matters from the genital organs; not large enough to interfere with the proper support of the body. Besides these things there is a *succession of cushions*, to regulate, at pleasure, the position of the woman, and two cranks or handles (moveable or fixed, at pleasure), by which the woman supports herself while undergoing the contractile efforts of the womb. If I remember right, the elevated portion at the head of the bed did not admit of graduation; I may be mistaken in this, however, as it would seem that it *should* and might easily.

The splendor of some of the buildings now devoted to hospitals in Italy is quite striking. In point of architecture, and, often, internal decoration, there probably is nothing of the same destination that equals them.

At *Venice*, the building known as the Scuola di San Marco is now a portion of an immense hospital, the remainder of which is formed out of the adjoining convent of the Dominican and the Franciscan friars. It is really a *long walk* through this enormous building, which contains a handsome church and a smaller chapel also, within its walls. The arrangement and planning of the wards, beds, and appurtenances, is most excellent—plenty of air, and evidently great attention to cleanliness. The lunatic wards are in excellent condition—and so, as to comfort and attention, are the unfortunate inmates. This, I believe, was one of the first institutions to abandon the restraint system. We entered the large room which contains the greater number of lunatics. Very many were working in one way or another; some came and gazed upon us, with not an *idiot*, but a *mischievous leer* (this was the female ward); only one was at all violent. She rushed towards us from the farther extremity of the hall, uttering a torrent of words in a loud tone, and brandishing her *knitting work!* I looked sharp at the needles, but she, on arriving where we stood, stopped a moment—and then darted to a seat, where she continued scolding. But the physician of the establishment soon entered, and going to her, took her hands in his, and saying a few words she was quiet as if by magic. Some two or three more were wild, but not violent; every part of this establishment seems admirably managed.

In the sick wards there is suspended over the head of each bed the name of the disease, under which the individual is laboring.* I noticed a goodly crop of *bronchitis* many cases of pericarditis, several also of intermittent fever: in the surgical wards one case of spina bifida; abscess, fracture, &c. At the head of each bed also hangs a ticket, containing name, profession, age, dates symptoms, internal and external remedies, &c. &c.

I should *think* that more medicine was given internally in the Italian hospitals than in the French—a supposition which may have some slight confirmation in the different *size* of the *spaces* allotted to external and internal remedies in the ticket alluded to. A very formidable, but exceedingly good-looking, apothecary's shop is located, sentinel-like, near the entrance to the wards. The remark above made in reference to the finish and ornament of some of the Italian hospitals, applies in its full extent in this case; an author, speaking of the building, says—"The external architecture of its elevation is singularly fanciful and elegant; Byzantine richness blending itself with the grace of classical architecture, combinations defying all rules, but productive of a most magical effect The carved work of the ceilings is, in many of the rooms, peculiarly beautiful; the contrast and effect are singular and striking in glancing from the rich and varied ornaments above and around, to the palid countenances and paraphernalia of the sufferers stretched beneath."

At Milan, the "Ospedale Maggiore" is a noble establishment; a *donation* of the site of an ancient palace by Francesco Sforza in 1456 was its commencement. The front is 800 feet in length; the writer of Murray's Guide Book speaks of the Gothic portion of the building as "magnificent." Besides this fine institution, there are the Lazaretto and the Ospizio Trivulzi, the latter styled by the same writer a "noble monument of pious charity," containing 600 inmates, all over 70 years of age, well fed and clothed and permitted once a week to visit their friends." The Lazaretto, now disused, except in some portions for small shops, is in the form of a square cloister *one quarter of a mile* on each side in length; in the central square is a chapel. A fine crop of hay had been made and lay spread upon the turf; men and woman in some parts of the square still turning it. The long cloistered arcades are quite striking. The *Trivulzi* I have not visited.

At Genoa, the great Poor House is well worth seeing; clean and well administered; its church, Santa Maria, contains an invaluable work of Michael Angelo. Beside this, are the Ospedale del Pammatone, and the Deaf and Dumb Institution: the former again confirming the remark made in regard to the ornate appearance of many of these institutions.

CHEMISTRY,

OZONE.

1. *Ozone.*—For some years, Prof. Schonbein, of Basle, has been engaged in experimenting on the cause of the peculiar odor developed by electricity; during the electrolysis of water, the oxygen given off is mixed with a small quantity of a volatile odorous substance; to this he has given the name of *ozone*. For some particulars of its production, see the *American Journal of Science*, Vols. xli and xlix.†

This substance he supposed to be a halogen body, analagous in its reactions and affinities to chlorine and bromine, and indeed it has many points of resemblance; it destroys vegetable colors,

*This I have not noticed elsewhere in Italy.

†See also, Schonbein Archives de l'Electricité No. 15. Tom. iv. pp. 333—454; No. 17, Tom. v. p. 11—23, and No. 18, Tom. v. p. 337—342. Marignac, 17. v. p. 5—11.; besides other authorities quoted farther.

decomposes bromide, iodide and ferro-cyanide of potassium, and acts upon the metals.

He regarded it as constituting the base of nitrogen, which he supposed to be a compound of ozone and hydrogen, analagous to the chloride of hydrogen. He supposed it to be a secondary product of the electrolysis, and formed by the reaction of the nascent oxygen on the nitrogen of the atmospheric air dissolved in the water.

M. Schonbein was subsequently enabled to produce this body by purely chemical means; when phosphorus, at ordinary temperatures, is exposed to *moist air*, ozone is always generated.* This reaction is best observed by introducing into a large glass vessel, a piece of phosphorus one or two inches long, and sufficient water to partially cover it; the whole may now be exposed for 24 hours to a temperature of 68° to 75° F., when the air will be found very highly charged with ozone.

From its supposed nature as the base of nitrogen, this body has attracted considerable attention from chemists, and has been made the subject of much experimental research, as well as a great deal of theorising and speculation. It has been particularly examined by M. Marignac and Mr. Williamson.

The former chemist has shown that ozone is generated by the electrolysis of dilute sulphuric acid, independently of the presence of nitrogen; it being produced equally well in a vessel exhausted of air.† M. Marignac also instituted a series of experiments on ozone produced by chemical means; air was made to pass through a long tube containing phosphorus, and thus it became sufficiently charged with ozone for the purposes of experiment. He found that perfectly dry air is incapable of generating this substance, and also that air freed from oxygen by passing over ignited copper, produced no trace of it; but if a very little oxygen (insufficient to support combustion for a moment,) is present, ozone is produced with the same ease as in ordinary air. Pure oxygen, nitrogen or hydrogen alone, do not produce it, but if a small quantity of oxygen is mixed with hydrogen, ozone is formed with great rapidity, on passing the mixture over phosphorus.

Air impregnated with ozone looses entirely its characteristic properties, if passed through a tube heated between 570° and 750° F. This principle is absorbed by water, but not by oil of vitriol, ammonia or chloride of calcium. If the air is passed through a solution of iodide of potassium, it loses its odor, and the salt is decomposed with the liberation of free iodine. Some iodate of potassa is also found in the solution.

Ozone is readily absorbed by the metals. If the ozonized air is passed through a glass tube containing silver in a porous form, (from the decomposition of the acetate by heat,) it loses its peculiar odor, and the silver is converted into a blackish brown substance which when thrown into water, gives off oxygen gas with effervescence, and the remaining substance has all the characters of ordinary oxide of silver.

These curious results, many of which were previously obtained by Schonbein, prove that nitrogen is not concerned in the formation of this substance, and seem to show that these peculiar reactions are owing to oxygen in a loosely combined state.

Mr. Williamson's experiments confirm these observations, and go to prove that it is a compound of oxygen and hydrogen. In his experiments, the oxygen from the electrolysis of dilute sulphuric acid, was thoroughly dried by passing it over chloride of calcium; the gas thus dried, was passed through a glass tube containing metallic copper, and heated to redness; water was formed abundantly and condensed in the cool part of the tube, and this formation of water continued as long as the process lasted. From this it appears that water is formed by the reducing power of the metal. To remove all sources of error, the oxygen was evolved from the electrolysis of a solution of sulphate of copper, in whose decomposition no hydrogen is set free, the oxygen thus obtained possessed strongly the peculiar ozone odor. It was now passed over copper (obtained by decomposing the oxide by carbonic oxide,) heated to redness, and water was immediately formed as in the last experiment.

In subsequent experiments, the ozonized oxygen previously dried, was passed through a glass tube heated to redness, by which the peculiar odor was completely destroyed: to this an accurately weighed chloride of calcium tube was fixed, after the gas had been passed a short time, the tube was found to have increased perceptibly in weight.

When the ozonized oxygen is passed through water, it communicates to it the peculiar odor. If this solution is added to a mixture of starch paste and iodide of potassium, a blue color is produced; and when mixed with ferro-cyanide of potassium, this salt gives a blue precipitate with proto-salts of iron. Solutions of lime and baryta give, with a solution of ozone, a heavy and apparently crystalline precipitate.

Mr. Williamson states as the result of his experiments, that ozone is not produced by the action of air on phosphorus, but we cannot admit this, for several reasons. The results of M. Marignac were obtained by the substance formed in this manner, and many of the results obtained by him are precisely the same with those of Mr. Williamson; and these as well as others obtained, cannot be referred to the action of phosphoric acid.

Mr. Williamson's arrangement, which consisted of a tube containing asbestos, on which the phosphorus was deposited by sublimation, was such as completely to defeat the object in view; for although ozone is generated by the action of phosphorus on air, yet it is itself absorbed or decomposed, when brought in contact with a large surface of phosphorus; and this result would especially occur when the phosphorus was heated, as it must have been from the exposure of so large a surface. Our own observations also have shown that something distinct from phosphoric or phosphorous acids, is generated by this process, for after the air enclosed in the globe had been thoroughly agitated and allowed to stand some hours, in contact with a mixture of carbonate of lime and water, it still retained the peculiar odor, and the power of decomposing iodide and ferro-cyanide of potassium.

The conclusion which these gentlemen deduced from their experiments was, that the substance which presents these curious reactions is a compound of oxygen and hydrogen, containing more oxygen than water, and perhaps isomeric with the deut-oxide of Thenard. This view was certainly consonant with their results, and indeed they appeared to be inexplicable by any other hypothesis. The oxidation of silver to such a degree, and the conversion of iodide of potassium into iodate of potassa, evince the existence of oxygen in a feebly combined and very active state, while the formation of water by passing it through an ignited glass tube or over heated copper, show that hydrogen is also present. More recently, however, we have a memoir on this subject by MM. Louis Rivier, and Professor L. R. de Fellenberg,* which contains many interesting facts.

In their experiments they passed for two hours a series of electrical sparks through a glass vessel containing humid air, and whose sides were moistened with a solution of carbonate of potassa. The air acquired strongly the peculiar odor of ozone; which, by standing some time, disappeared, and the liquid was found to contain *nitrate of potassa*. They then proceeded to examine the ozone produced by chemical means. The arrangement consisted of a tube about three feet in length, in which were placed several pieces of phosphorus moistened with a little distilled water: to one end was adapted a recurved tube, dipping in a bottle which contained milk of lime; by means of an aspirator connected with the other tube; the air was made to pass slowly over the phosphorus and through the milk of lime, at the rate of 10 litres in 24 hours. The ozone thus formed was absorbed by the alkaline fluid, which after 24 hours was removed. After filtration, it was evaporated to dryness, redissolved in distilled water, decomposed by carbonate of ammonia, and the resulting salt again decomposed by a solution of strontia, when it afforded a salt in beautiful needles, which gave the following reactions: with sulphuric acid and brucine, a reddish yellow, and with narcotine a red color; it destroyed the color of sulphate of indigo; rendered brownish-black the protosulphate of iron; its solution in water with pure hydrochloric acid, readily dissolved gold leaf, and from the solution, chloride of tin threw down the purple precipitate of Cassius; some of the salt mixed with bisulphate of potassa, and heated in a glass tube, gave off abundant red vapors, which promptly blanched indigo paper held in the tube.

* The peculiar odor of phosphorus is probably due entirely to the formation of this new substance.

† In one experiment, water acidulated by sulphuric acid was decomposed in a vessel, from which the air was completely excluded. After the decomposition had been continued for two or three days, and when more than one fourth of the liquid had been driven off in the form of gas, the oxygen was found to be as strongly impregnated with ozone as at the commencement of the experiment.

*Archives de l'Electricité, No. 17, Tome v. 1845.

They next proceeded to distill a portion of the acid liquor produced by the slow oxydation of phosphorus; a very gentle heat was applied, and about one third of the liquor distilled over; the vapors were received in a solution of strontian; at the close of the operation, this had lost its alkaline reaction; a little more strontian was added, and the whole evaporated to dryness: by re-solution and crystallization, a quantity of salt in fine crystals was obtained, weighing about one and a half grains. This salt gave the same reactions as that above, which must be regarded as decisive evidence of nitric acid; the test with gold, and above all the red fumes evolved by the mixture with bisulphate of potassa, place its nature beyond all doubt.

From these experiments they concluded, that the reactions attributed to ozone, are in reality due to the presence of a small portion of nitrous acid; and they found that air mixed with a very small portion of nitrous gas, acquired an odor similar to that of ozone, blanching turmeric, dahlia and indigo papers, and presenting generally the same phenomena as ozonized air. They supposed that the acid first formed is the nitrous, as pure nitric acid when very much diluted, does not render blue a mixture of starch and iodide of potassium, which reaction is readily produced by the nitrous acid; and that the nitrites formed are converted into nitrates by the absorption of oxygen during the subsequent evaporation.

These experiments seemed to show, that a close relation certainly exists between nitric acid and ozone, and many chemists were disposed to regard them as identical; but the late researches of M. Schonbein* have cleared up to some extent the difficulties which seemed to envelop the subject.

M. Schonbein has suggested, that when water acts on hypo-nitric acid, there is formed besides hydrated nitric acid, a compound having the formula NO^2+HO^2, and which he calls the peroxide of azote and hydrogen. It is to the presence of this in the solution of hypo-nitric acid, that we are to attribute its remarkable powers of oxidation. The same reaction takes place when the hypo-nitric acid is introduced into a flask of moist air.

If having ozonized the air of a jar by phosphorus, we suspend in it a piece of carbonate of ammonia, till the air acquires the property of immediately blueing litmus paper, we shall find that it still retains all the properties of ozone—the peculiar odor, the power of decomposing iodide and ferro-cyanide of potassium. This body can then exist in an atmosphere of carbonate of ammonia, and also, as is found by experiment, in one of pure ammonia.

If we take a portion of hypo-nitric or fuming nitric, and dilute it with water till it loses its color, and having poured a small portion of it into a flask, suspend in the air of the flask a piece of carbonate of ammonia, till the air acquires an alkaline reaction, we shall find that it is capable of decomposing iodide of potassium, and blanching indigo paper, and even of converting a crystal of ferro-cyanide of potassium into the ferro-cyanide in the course of twenty-four hours; in fact it possesses all the properties of ordinary ozonized air. The circumstances under which these reactions are exhibited, do not admit of the view that the oxidizing agent is any acid of nitrogen, and hence M. Schonbein concludes that there exists the compound NO^2+HO^2.

An interesting fact bearing on this, is the manner in which the mixture of hypo-nitric acid decomposes ferro cyanide of potassium. If we mix in a tube closed at one end, a solution of the ferro-cyanide with an acid solution prepared as above described, and then invert the tube in water, a violent disengagement of gas takes place, which is found to be pure nitric oxide, and the solution contains nitrate of potassa and the ferricyanide.

This decomposition cannot be attributed to the nitric acid contained in the mixture, for we find that pure nitric acid if slightly diluted, does not decompose the salt, as neither the hypo-nitric nor nitrous acids can exist in the presence of water.

It is well known that ozone decomposes the iodide of potassium, liberating iodine. If to a solution of the iodide, we add the acid liquor above mentioned, an abundant escape of nitric oxide takes place, while iodine is precipitated and nitrate of potassa forms. Pure nitric when diluted with the same portion of water as in the acid mixture, does not decompose pure iodide of potassium.

The results of Fellenberg are certainly possessed of great interest. The production of nitric acid from the elements of the atmosphere by electricity, was long since noticed by Cavendish, and is a well established fact; but that this acid is formed by the action of phosphorus on air, is a new and highly interesting result. That this highly oxidized body should be generated in the presence of phosphorus, seems at first paradoxical, and we can only refer it to that mysterious force, which Berzelius has named *catalysis*, and which is in fact only a manifestation of the law announced by La Place, that "a molecule set in motion by any power, can impart its own motion to another molecule with which it may be in contact." In other words, the phosphorus, while in the act of oxydation, communicates its own peculiar state to the nitrogen, which is thus enabled to combine with the oxygen and generate nitrous acid. This certainly affords us a very striking illustration of that law, and we think that this phenomenon is incapable of explanation on any other principle. M. Marignac has suggested that electricity generated by the oxydation of the phosphorus may be the cause. This however seems improbable, as it has not been shown that it is excited during the process, and the theory rests on the idea that all chemical action is attended by a development of electricity. But when we consider that our most powerful electrical discharges can generate comparatively very minute quantities of ozone, the amount of electricity that can be supposed, under any circumstances, to be generated by the oxydation of a small piece of phosphorus, seems utterly inadequate to the result.

The experiments of Fellenberg, it will be seen, do not really militate against the existence of ozone; they have only shown that in the ordinary processes by which ozone is generated, nitric acid is also produced, and the similarity between the reactions of air mixed with a little nitric oxide, (by which hypo-nitric acid is generated,) and ozonized air, is readily explained by the researches of Schonbein.

In explanation of the production of nitric acid and ozone by the slow oxydation of phosphorus, we may suppose that nitrous or hypo-nitric acid is generated in the manner before suggested, which, by the action of aqueous vapor in the atmosphere, is converted into nitric acid, and the hypothetical peroxide of azote and hydrogen.

Although ozone produced by chemical means is probably always associated with nitric oxide, yet we cannot avoid the conclusion, apparently overlooked by Schonbein, that the ozone generated under certain circumstances, by the agency of electricity, (as in the experiments of Marignac above mentioned,) must be independent of, and free from nitric oxide. This has the odor and all the other properties of ozone produced by chemical means, and it is difficult to suppose that there can be two compounds, one of which is HO^2 and the other NO^2+HO^2, identical in all their properties, and we are hence led to conclude, that, although such a compound may exist in the mixture of hypo-nitric acid and water, it does not exist in the ozonized air, whether this impregnation is effected by the action of phosphorus, or by agitation with the acid solution in question.

MM. Marignac and de la Rive* have recently obtained some results that seem to prove that water is not essential to the production of ozone. They find that if a series of electrical sparks are passed through oxygen, however carefully dried, ozone is formed, and they suggest that ozone may be nothing more than oxygen, to which "a peculiar state of chemical activity," is given by the influence of the electric current, M. Schonbein, however, regards the formation of ozone as a certain indication of the presence of water in the gas, but in quantities so minute as to escape the action of the ordinary hygrometive substances. The gentlemen above quoted however, find that the oxygen evolved from very pure chlorate of potassa previously fused, gave ozone, when exposed to the action of the electric spark, as abundantly and rapidly as moist oxygen.

M. Schonbein's hypothesis, consequently, rests on the assumption that the gas obtained as above and apparently perfectly dry, still contains water. The suggestion that it is modified oxygen, is one of great interest, and derives some weight from the recently observed facts regarding the allotropism of elementary bodies; and particularly the late researches of Draper on the allotropic condition of chlorine. If oxygen, by the influence of the eletric fluid assumes a state of exalted energy and chemical affinity, we are furnished with a key to the *modus operandi* of electricity, in causing many chemical combinations. But in a science which is based on experimental knowledge, we must carefully avoid deducing our conclusion from isolated experiments or theoretical

*Archives de l'Electricité, No. 20, Tome v. 1845.

*Archives de l'Electricité, No. 18, Tome v. 1845.

generalizations, however elegant those deductions may appear; and in the case of ozone, very careful investigations, performed with the most rigid exactness, are required before we can admit such a great and interesting conclusion.

At present, then, we agree with Prof. Schonbein, that the great weight of evidence rests with the view that it is a deutoxide hydrogen; which, although differing from the deutoxide of of Thenard, has yet many striking points of resemblance; both bleach powerfully, both transform many protoxides to peroxides, (as, for example, protoxides of calcium and barium,) both transform sulphurous to sulphuric acids, and are decomposed by heat and many organic substances.

With regard to the late results of Marignac and de la Rive, M. Schonbein remarks: 1. Ozone has so strong an odor, that extremely small quantities are capable of affecting the olfactory nerves. 2. Quantities of ozone by far too minute to be ascertained by weight, still perceptibly color the test paste.

From this it follows that a quantity of aqueous vapor, too small to be sensible by our most delicate hygroscopic tests, may generate so much ozone as shall be sensible both to the smell and the iodine test.

We have thus endeavoured to give a brief abstract of the present state of our knowledge with regard to this subject, and would refer the reader who wishes to examine the subject more thoroughly, to the authorities already quoted. T. S. Hunt.

THE

British American Journal.

MONTREAL, AUGUST 1, 1846.

AUGMENTATION OF LICENSING BOARDS FOR THE PROVINCE.

Three months have now elapsed since our remarks against an augmentation of licensing boards for the Province were submitted to the profession. At that period the Provincial Legislature was in session, and we have some good grounds for believing that our observations tended, in no small degree, to that result which ended in the arrest of the bill until the deliberate opinion of the profession at large was heard on a matter of such vital importance to their interests. With the single exception of an anonymous scribbler in one of the French Canadian newspapers, who, from *interested motives*, made a miserable attempt to pervert the plain meaning and spirit of our remarks to subserve his own ends, not one sentence condemnatory of the position which we assumed and upheld has been publicly expressed. Our remarks were elicited from a high sense of what we conceived to be the *true interests* of the profession, and we called upon that profession, whose best interests we conceived we were supporting, to sustain us in them. During the interval which has elapsed, what has that profession done in the matter? Is this question to be permitted to lie over until the ensuing session of Parliament, and action taken on it only when the bill again comes before the House? Or will the profession only awake from its lethargic slumber when it finds itself in a false position as to its future character, from the existence of a serious evil which a little timely prudence and careful foresight might have obviated? These are questions which each member of the profession should himself individually answer; and, having done so, take such steps in the premises as the nature of the reflections which they may engender may clearly indicate.

From private letters which we have received from various quarters, we have reason to know that our remarks have met with a very general approval; and it is the more extraordinary, that this general concurrence in sentiment should have been followed by such complete apathy in acting, especially when we consider that although the measure be one of general importance, each *individual* member of the profession becomes individually affected. This indifference, for we believe it to be only apparent, may be explained by the often quoted, but still too frequently true, adage, that what is every body's business is usually nobody's; but we can hardly allow ourselves to think that, in a matter of such moment, some minds will not be found who will step forth and become prominent in the movement. There are few subjects of medical polity which could so well or deservedly receive attention at the hands of the medical societies of the Province. These are the parties who ought first to move in the matter, and it is to them that the profession at large should in the first instance turn for the first expression of opinion.

We regard the position of the profession in this Province, at the present moment, as one of ominous import, for its future weal or woe. It is at present in what may, with perfect accuracy, be termed, a transition state, and its future character and respectability most manifestly depend on its truthfulness to itself. A Bill, affecting its interests in every point of view, will undoubtedly become, at an early day, a legislative enactment, and it remains for the profession to have, or not to have, incorporated as a part of it, clauses which may render every educational restriction a cypher or a dead letter, in exact accordance with their own energy or inactivity in denouncing or permitting any such alteration, as was attempted in the one proposed at the last session.

The Credit System in Medical Schools.—The following, from the *Western Lancet*, with the observations of the *New Orleans Medical and Surgical Journal*, will, we think, be found to apply to other latitudes than those of New Orleans or Lexington. We therefore copy it:

"We are fully satisfied that an influence extremely detrimental to the profession has grown out of the custom of granting credit in medical schools. The object in adopting this course is *to secure a large class, perhaps for the purpose of out-numbering a rival school;* and the consequence is, that all who present themselves, wholly irrespective of merit or qualifications, are duly enrolled as medical students, and their names go out to the world, swelling the catalogue of some highly flourishing school.

The success of such pupils operates as an incentive to others to engage in the study, seeing that it is so cheap; and many a one, who either has no occupation, or who may be too indolent to follow a mechanical pursuit, forthwith doffs his humbler business, and unites in swelling the Æsculapian throng. In this way the profession becomes thronged with practitioners of every grade, and all parties, even those favoured with the gratuity, are ultimately injured. It is true, some meritorious men will be found unable to pay; but there can be no doubt, that the indiscriminate admission of pupils into medical schools is not only an act of injustice to those who do pay, but also tends directly to degrade the profession. We are gratified, therefore, to state, that the Transylvania Medical School has determined, by formal resolution, to abolish, *entirely*, the credit system: and these resolutions will be strictly adhered to. We hope all other schools will manifest a similar regard for the interests of the profession, and follow an example so worthy of imitation."—*Western Lancet.*

"In this hope we fully concur. The course adopted by some schools in this country is not only undignified, but highly injurious to the profession; and must ultimately lead to their own disgrace and downfall. *In order to swell their numbers, for of numbers is their only boast, they will take any who offer.* The great misfortune, too, is, that pecuniary defficiency is often not the most serious one that stands in the way of these aspirants, in their attempts to obtain admission into schools where less importance is attached to numbers. We have known ignorant mechanics, who could with difficulty write their own names, to turn steam doctors; and, after spending their hard-earned pittance, in endeavouring to carry out the tricks of fraud and ignorance, they determined to obtain a backer in some medical school. This they may do, 'without money and without price,' and we may add, without labour, study, or any other qualification: it is enough that they have honoured the learned professors with the light of their countenances. They are even offered advantages over the better class of students; for they have only to apply to the Dean, who registers them as Mr. ———, of ———, Practitioner; and, after four months of attendance, he goes forth, without fail, to come out under new colours. In this way our country is now being flooded with men, whose only title to respectability of any kind is in the parchment issued by schools which are certainly jeopardizing their own claims to the respect of the profession generally.—*New Orleans Medical and Surgical Journal, July.*

Statistics of Schools of Medicine in the United States.—The following items of intelligence from Medical Institutions in the United States will be found to be not devoid of interest. The table which we have given below, has been compiled from those furnished by our esteemed contemporaries, the New York Journal of Medicine, and the Buffalo Medical Journal, and we believe that the list of schools is as complete as it can be rendered.

	Class 1845-6.	Number of Graduates
University of Pennsylvania	471	168
Jefferson Medical College, Philadelphia	459	170
University of the City of New York	425	131
College of Physicians and Surgeons, New York	200	38
Geneva Medical College, New York	178	39
Albany Medical College, New York	115	42
Harvard University, Boston, Mass.	159	31
Berkshire Medical Institution, Mass.	142	35
Castleton Medical College	140	36
Yale Medical College, New Haven, Conn.	53	19
Cleveland Medical College, Ohio	195	52
Willoughby Medical College, Ohio	164	40
Vermont Medical College, Woodstock	—	24
Ohio Medical College, Cincinnati	195	46
Transylvania Medical College, Lexington, Ky.	171	64
Louisville Medical Institute	345	43
University of Maryland, Baltimore	147	40
Bowdoin Medical College, Brunswick, Maine	73	19
Rush Medical College, Chicago, Ill.	50	9
Indiana Medical College, LaPorte	81	18
Medical College of Louisiana, New Orleans	103	20
Medical College of Georgia, Augusta	112	15
Missouri University, St. Louis	92	29
Kemper College, St. Louis	—	11
Western Reserve College	160	—
Pennsylvania Medical College	—	36
Philadelphia College of Pharmacy	—	16
College of Dental Surgery, Baltimore	—	9

Caledonia Springs.—This fashionable Spa appears still, and deservedly, to maintain its claims to general favour. The beneficial effects which a course of these mineral waters is capable of inducing in some diseases, have been too generally recognised to admit of dispute at present. The cases which appear to have most readily yielded to a treatment by them, are chronic rheumatism, some forms of dyspepsia, and some cutaneous affections. We have seen some cases of secondary syphilis decidedly benefitted, the curative agents being, in all probability, the iodine and the sulphuretted hydrogen, which, according to Chilton's analysis, are met with in all the springs, of which there are three kinds. A fourth spring was discovered a few years ago, and was analytically examined by Prof. Williamson, of Queen's College, Kingston. It has proved itself to be a strong saline one, containing both iodine and bromine. It is probable that to the same active agents must be attributed the benefits derived in the other diseases to which we have thus generally adverted, conjoined with the change of air, more restricted and moderate diet, and the other concomitants usually met with at watering places. A physician (Dr. Stirling) is in daily attendance at the Springs, whose advice should be taken by invalids, not only as to the proper mineral water to use, but also to the proper regiminal treatment to be adopted

in the particular case, for we believe that a strict regimen has as much to do with the amount of good derivable from a sojourn there as the mere drinking of the waters. We subjoin the several analyses of these waters by Dr. Chilton and Professor Williamson:—

INTERMITTENT SPRING—Sp. Gr. 1,0092.

By James Williamson, Esq., Professor of Chemistry, Queen's College, Kingston.

In Imperial Pint, . . .	Grains, 123,04
Carbonate of Magnesia, . . .	7,437
Carbonate of Lime, . . .	2,975
Sulphate of Lime, . . .	1,788
Chloride of Sodium, . . .	98,925
Chloride of Magnesium, . .	11,916
Iodide of Sodium, . 3 in a gallon,	
Bromide of Sodium, . 1,7 in a gallon,	
Grains, . .	123,04

Gases, . { Light Carburetted Hydrogen, Carbonic Acid Gas, Sulphuretted Hydrogen.

GAS SPRING.

By James R. Chilton, M.D., New York.

One quart of Water.

Chloride of Sodium, ...	89,75
Do. Magnesium, . . .	1,63
Do. Potassium, . . .	,55
Sulphate of Lime, ...	1,47
Carbonate of Lime, ...	2,40
Do. Magnesia, . . .	2,50
Do. Soda, ...	1,00
Do. Iron, ...	,03
Iodide of Sodium, ...	,35
Resin, a vegetable extract, . . .	,52
Grains, . .	100,20

Gases, . { Carbonic Acid. Sulphuretted Hydrogen, Nitrogen.

WHITE-SULPHUR SPRING.

By James R. Chilton, M.D., New York.

One quart of Water.

Chloride of Sodium, ...	60,48
Do. Magnesium, . . .	,66
Sulphate of Lime, ...	,82
Carbonate of Lime, ...	,42
Do. Magnesia, . . .	3,60
Iodide, ...	
Vegetable Extract, &c. . . .	,30
Grains, . .	66,28

Gases, { Carbonic Acid, 3,20; Sulphuretted Hydrogen, 6,14

9,34 cub. inches.

SALINE SPRING.

By James R. Chilton, M.D., New York.

One quart of Water.

Chloride of Sodium, ...	108,22
Do. Magnesium, . . .	2,01
Sulphate of Lime, ...	1,28
Carbonate of Lime, ...	2,00
Do. Magnesia, . . .	5,12
Do. Soda, ...	,82
Iodide of Sodium, ...	,38
Vegetable Extract, ...	,61
Grains, . .	120,44

One hundred cubic inches of the Gas from the Gas Spring, analyzed, is as follows:

Light Carburetted Hydrogen, . .	82,90
Nitrogen, ...	6,00
Oxygen,*	1,56
Sulphuretted Hydrogen, . . .	4,00
Carbonic Acid, ...	5,51
Cubic inches, . .	99,97

Appointment to McGill College.—At a late meeting of the Governors of the University of McGill College, Edmund A. Meredith, Esq., A.M., L.L.B. of Trinity College, Dublin, was appointed Principal, *pro tempore.*

Appointment of Members to the Medical Board.—His Excellency the Governor General has been pleased to associate upon the Board of Medical Examiners for the District of Montreal, under the Ordinance 28, Geo. III., cap. 8, the following gentlemen, viz.:—

Wolfred Nelson,
Francis Badgley,
Pierre Antoine Conefroy Munro,
William Sutherland, and
Jean Gaspard Bibaud, Esquires, Doctors of Medicine.
—*Canada Gazette, July* 26.

Natural History Society.—At the annual meeting of this Society, held at its House on May 18th ult., the following gentlemen were elected officers for the ensuing year:—

President.....James Crawford M.D.
1st. Vice President.....G. W. Campbell, M.D.
2d. " " .....A. H. David, M.D.
3rd. " " .....S. C. Sewell, M.D.
Corresponding Secretary.....W. Fraser, M.D.
Recording Secretary.....C. H. Payne, M.D.
Treasurer.....A. LaRocque, Esq.
Cabinet keeper and Librarian....W. M. B. Hartley, Esq.

Council. { John Ostell, Esq. J. H. Joseph, Esq. A. F. Holmes, M.D. M. McCulloch, M.D. John Glass, Esq.

Library Committee. { Rev. W. T. Leach, A.M. A. F. Holmes, M.D. J. H. Joseph, Esq. J. Logan, Esq. W. Edmonstone, Esq.

* There is an evident error here. Oxygen and Sulphuretted Hydrogen cannot co-exist without a decomposition of the latter by the former.—ED.

Notice to Subscribers.—Frequent complaints have reached us of the irregular delivery of the *Journal* at the residences of our city subscribers. In some instances omissions have taken place for two or three numbers consecutively. Anxious to avoid what is a source of great annoyance to all parties, we have placed the distribution of the copies for subscribers in the city in the hands of another party; and, should irregularities in this respect hereafter occur, we should feel obliged by a prompt intimation of the circumstance. We have heard of no complaints, of late, from country subscribers.

RETURN OF SICK IN THE MARINE HOSPITAL, QUEBEC, FOR THE MONTHS OF MAY & JUNE, 1846.

Jos. Painchaud, Esq., M.D., Physician.
James Douglas, Esq., Surgeon.

Remaining in Hospital, on May 1st,		33
Admitted during the Month of May,	195	
" " " June,	345	
		540
Total treated,		573
Of these discharged,	401	
Died,	14	
Remaining,	158	
		573

DISEASES AND ACCIDENTS.

Febris,	92	Carcenoma,	1
Rubeola,	8	Syphilis,	63
Variola,	13	Orchitis,	9
Scarlatina,	1	Strictura Urethræ,	6
Erysipelas,	1	Fractura,	23
Pneumonia,	8	Contusio,	37
Bronchitis,	5	Vulnus,	14
Catarrhus,	12	Abscessus,	10
Hepatitis,	2	Ulcus,	24
Dyspepsia,	4	Ambustio,	6
Rheumatismus,	80	Gelatio,	1
Dysenteria,	8	Scrofula,	2
Diarrhœa,	28	Paronychia,	5
Cholera Sporadica,	7	Periostitis,	3
Hydrops,	3	Caries,	2
Cynanche	8	Hernia,	1
Icterus,	2	Furunculi,	7
Eucephalitis,	1	Parturitio,	5
Humphligia,	1	Hæmorrhagia,	1
Ophthalmia,	1	Morbi Alieni,	32
Gritis,	1		
Subluxatio,	2	Total,	540

J. B. D. Landry, *House Surgeon.*

Quebec, July 6, 1846.

REPORT OF THE MONTREAL GENERAL HOSPITAL FROM 27TH APRIL TO 1ST JULY, 1846.

Dr. Hall, Dr. Bruneau, } Attending Physicians.

Remained,	72	Discharged cured,	267
Admitted,	328	Died,	13
		Remaining,	120
Total treated,	400	Total,	400

IN-DOOR PATIENTS.		OUT-DOOR PATIENTS.	
Belonging to Montreal,	167	Belonging to Montreal,	504
Immigrants,	125	Immigrants,	90
Seamen,	36	Seamen,	9
Total,	328	Total,	603

Males,	211	Males,	312
Females,	117	Females,	291
Total,	328	Total,	603

DISEASES AND ACCIDENTS.

Abscessus,	5	Iritis,	2
Ambustio,	3	Incontinentia Urinæ,	1
Amemorrhœa,	7	Lagostoma,	1
Apoplexy,	1	Lumber Abscess,	1
Ascites,	1	Lupus Exedens,	1
Bronchitis,	19	Mania,	3
Bubo,	2	Mastoitis,	1
Catarrhus Chronicus,	1	Menorrhagia,	2
Cholera (sporadica),	2	Morbus Cordis,	1
Colica,	2	Œdema,	3
Conjunctivitis,	2	Ophthalmia,	2
Contusio,	18	Orchitis,	1
Coup de Soliel,	1	Otorrhœa,	1
Cynanche,	1	Paralysis,	1
Debilitas,	2	Paronychia,	2
Delirium Tremens,	7	Periostitis,	1
Diarrhœa,	16	Phthisis,	3
Dislocatio,	2	Pleuritis,	1
Dyspepsia,	5	Pleurodynia,	2
Dysuria,	1	Pneumonia,	6
Eczema,	2	Porrigo,	1
Enteritis,	1	Prolapsus Uteri,	1
Epilepsia,	2	Psora,	3
Erysipelas,	4	Relaxation of Uterus,	1
Erythema,	1	Rheumatismus,	24
Febris Com. Cont.,	76	Rupia,	1
" Typhus,	13	Scarlatina,	3
" Intermittens,	1	Scorbutus,	1
Fractura,	2	Scrofula,	2
Furunculus,	2	Sinus (in Testicle),	1
Gastritis,	1	Subluxatio,	2
Gastrodynia,	2	Synovitis,	1
Gonorrhœa Preputialis,	1	Syphilis,	15
Hematemesis,	1	Strictura,	1
Hemorrhois,	1	Tonsilitis,	1
Herpes Circinatus,	1	Tumor,	1
" Miliare,	1	Ulcus,	21
Hydrarthrus,	1	Vulnus,	1
		Total,	328

Alexander Long, M.D., *House Surgeon.*

BOOKS, &c., RECEIVED DURING THE MONTHS OF JUNE AND JULY.

The medical Examiner, Philadelphia.—June, July.

The New York Medical and Surgical Reporter—Nos. 17, 18, 19, and 20.

Dublin Medical Press, May 15, 22, 29; June 3, 10, 17, 24; July 1.

Geological Survey of Canada—Report of Progress for the year 1844.—Montreal, Lovell & Gibson, 1846.

Wiley & Putnam's Literary News Letter—June.

Boston Medical and Surgical Journal, Nos. 18, 19, 20, 21, 22, 23, 24, and 25.

The Western Lancet & Medical Library, devoted to Medical and Surgical Science—Vol. v. Nos. 1 and 2.

Southern Medical and Surgical Journal—June, July.

St. Louis Medical & Surgical Journal.—Vol. ii. No. 1.

The American Journal and Library of Dental Science—June.

Kernot's Catalogue of American and English Books.—New York.

Illustrated Botany—June.

American Journal of the Medical Science—July.

American Journal of Science and Arts—July.

Buffalo Medical Journal—July.

Southern Journal of Medicine and Pharmacy—July.

The Medical News and Library—July.

Missouri Medical and Surgical Journal—July.

Bill of Mortality for the City of Montreal, for the month ending June 30, 1846.

Diseases		Male.	Female.	Total.	Under 1.	1 & under 3	3 — 5	5 — 10	10 — 15	15 — 25	25 — 35	35 — 45	45 — 55	55 — 75	75 upwards
Epidemic or Infectious,	Measles,	8	16	24	10	9	4	1	.	.	.	.			
	Scarlatina,	1	1	2	.	.	1	.	.	.	.	.			
	Small Pox,	2	.	2	2	.	.	.	.	.	.	.			
	Hooping Cough,	1	.	1	1	.	.	.	.	.	.	.			
	Fever,	26	23	49	27	9	1	2	2	2	3	3			
Diseases of Brain and Nervous System,	Paralysis,	3	2	5	.	.	.	.	.	.	.	1	1	2	1
	Apoplexy,	1	.	1	.	.	.	.	.	.	.	.	.	1	
	Inflam. of Brain	1	2	3	1	.	.	.	.	1	.	1			
	Convulsions,	6	2	8	7	1	.	.	.	.	.	.			
	Dentition,	3	5	8	3	5	.	.	.	.	.	.			
Diseases of the Thoracic Viscera,	Consumption,	30	31	61	21	8	.	1	1	7	9	7	2	5	
	Croup,	4	1	5	3	.	1	1	.	.	.	.			
	Hæmorrhage,	1	.	1	.	.	.	.	.	.	.	1			
Diseases of Abdominal Viscera,	Jaundice,	2	1	3	1	.	.	.	.	.	.	.	.	1	1
	Cholera (sporadic),	3	1	4	4	.	.	.	.	.	.	.			
	Dropsy,	2	1	3	.	.	.	.	.	.	1	.	1	1	
	Diarrhœa,	7	4	11	5	3	1	1	.	.	.	.	.	.	1
Other Diseases, and Diseases not specially designated,	Inflammation,	18	16	34	21	8	1	1	.	.	1	1	1		
	Still-born,	5	4	9	9	.	.	.	.	.	.	.			
	Sudden Death,	.	2	2	.	.	.	.	.	.	.	.	.	2	
	Debility,	4	4	8	.	.	.	.	.	.	.	.	.	1	7
	Unknown,	6	.	6	6	.	.	.	.	.	.	.			
	Accidental,	1	1	2	.	.	.	.	.	.	1	.	1		
	Suicide,	2	.	2	.	.	.	.	.	1	.	.	1		
	Scroffula,	1	.	1	.	.	.	.	.	1	.	.	.		
	Ab cess,	1	.	1	1	.	.	.	.	.	.	.	.		
	Total,	139	117	256	122	43	9	7	3	12	15	15	7	13	10

MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR JUNE, 1846.

Date.	Thermometer.				Barometer.				Winds.			Weather.		
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10 P.M.	Mean	7 A.M.	Noon.	6 P.M.	7 A.M.	3 P.M.	10 P.M.
1,	+63	+90	+71	+76.5	29 84	29.85	29.80	29.83	S. by E.	S. by E.	S. by E.	Fair	Fair	Fair
2,	" 72	" 87	" 70	" 79.5	29.78	29.72	29.70	29.73	S. by E.	W.	W.	Fair	Th&rn	Rain
3,	" 62	" 81	" 68	" 71.5	29.84	29.77	29.72	29.78	W.	W.	W.	Fair	Fair	Fair
4,	" 61	" 84	" 68	" 62.5	29.75	29.72	29.78	29.75	W.	W.	W.	Fair	Fair	Rain
5,	" 65	" 69	" 57	" 67.–	29.60	29.69	29.60	29.63	W.	W.	W.	Fair	Rain	Rain
6,	" 60	" 74	" 55	" 67.–	29.65	29.71	29.85	29.74	W.	W.	W.	Fair	Rain	Rain
7,	" 47	" 59	" 53	" 53.–	30.00	30.03	30.12	30.05	W.	W.	W. S.	Fair	Rain	Rain
8,	" 45	" 70	" 55	" 57.5	30.32	30.31	30.32	30.32	W.	W.	W.	Fair	Rain	Rain
9,	" 53	" 83	" 62	" 68.–	30.37	30.26	30 12	30.25	S W by S	S.W.byW.	W. by S.	Fair	Fair	Fair
10,	" 60	" 85	" 67	" 72.5	30.02	29.83	29.80	29.88	W. by S.	W.	W.	Fair	Fair	Fair
11,	" 54	" 75	" 56	" 64.5	29.96	30.04	30.14	30.05	N E by E	N. E.	N. E.	Fair	Fair	Fair
12,	" 53	" 78	" 58	" 65.5	30.27	30.28	30.29	30.28	N. E.	N. E.	N. E.	Fair	Fair	Fair
13,	" 60	" 81	" 65	" 70.5	30.30	30.21	30.08	30.20	N. E.	E. by S.	E. S. E	Fair	Fair	Fair
14,	" 68	" 85	" 71	" 76.5	30.05	29.95	29.87	29.96	S. E.	S. E.	S.	Fair	Fair	Fair
15,	" 70	" 80	" 61	" 75.–	29.83	29.88	29.92	29.88	S. W.	S. W.	N. E.	Fair	Th&rn	Fair
16,	" 64	" 81	" 62	" 72.5	30.00	29.98	29.95	29.98	N. E.	N. E.	E. N. E.	Fair	Fair	Fair
17,	" 62	" 86	" 70	" 74.–	29.94	29.93	29.90	29.92	S. S. E.	S. W.	S. W.	Fair	Fair	Fair
18,	" 66	" 66	" 55	" 66.–	29.96	29 92	29.80	29.89	N. by W.	N.	N. E.	Fair	Rain	Rain
19,	" 67	" 71	" 56	" 69.–	29.70	29.63	29.59	29.64	N. E.	N.E.	N. E.	Rain	Rain	Rn&th
20,	" 52	" 60	" 51	" 56.–	29.66	29.77	29.73	29.72	N E by E	N.E.	N. E.	Rain	Fair	Rain
21,	" 48	" 49	" 43	" 48.5	29.70	29.72	29.75	29.72	N. E.	N. E.	N. E.	Rain	Rain	Rain
22,	" 46	" 56	" 48	" 51.–	29.89	29.94	30.26	30.03	N. E.	N. E.	E. N. E.	Fair	Rain	Fair
23,	" 57	" 69	" 55	" 63.–	30.17	30.14	30.07	30.13	N. E.	N.	N.	Fair	Fair	Fair
24,	" 60	" 88	" 66	" 74.–	30.03	29.97	29.94	29.98	W.	N. W.	N. W.	Fair	Fair	Fair
25,	" 67	" 85	" 66	" 76.–	29.98	29.93	29.93	29.95	N. W.	N. W.	N. W.	Fair	Fair	Fair
26,	" 66	" 86	" 67	" 76.–	29.90	29.87	29.92	29.90	N. W.	N. E.	E. by S.	Fair	Fair	Sh'ers
27,	" 62	" 81	" 65	" 71.5	29.97	29.94	29.93	29.95	E.	E.	E.	Fair	Fair	Fair
28,	" 64	" 85	" 73	" 74.5	29.96	29.93	29.93	29.94	E.	E.	E.	Fair	Fair	Fair
29,	" 70	" 93	" 75	" 81.5	29.97	29.91	29.90	29.93	E.	E.	E.	Fair	Fair	Fair
30,	" 74	" 96	" 79	" 85.–	29.96	29.93	29.90	29.93	E.	E.	E.	Fair	Fair	Fair

Therm. { Max. Temp., +96° on the 30th.
Min. " +43° " 21st.
Mean of the Month, +68°.83.

Barometer, { Maximum, 30.37 Inches on the 9th.
Minimum, 29.60 " " 5th,
Mean of Month, 29.93 Inches.

MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.—JUNE, 1845.

Latitude 43°. 39′.4. *N.* *Longitude* 79°. 21′.5. *W.* *Elevation above Lake Ontario,* 108 *Feet.*

Day.	Barometer at Temp. of 32°.				Temperature of the Air.				Tension of Vapour.				Humidity of the Air.				Wind.			Rain in inch on surf.	Weather.
	7 A.M.	3 P.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10P.M	Mean	7A M	3 P.M	10P.M	Mean	7A.M	3P.M	10P.M	Mean	7 A M.	3 P.M.	10 P. M.		
1,	29.492	29.390	29.339	29.3847	65.0°	69.4°	64.0°	65.36	.529	.601	.525	.546	.88	.87	.90	.90	E.	E.	Calm.	—	Aur. Pt 0 & 1 am. Th. 9 to 10 am. Cl'd.
2,	29.370	29.357	29.463	29.4221	64.0	66.4	56.1	60.29	.535	.524	.376	.455	.92	.83	.85	.88	Calm.	S. by W.	Calm.	0.180	M'tly cl'd. R'ng fr. 9 h 45 m am to noon
3,	29.531	29.433	29.409	29.4513	60.2	69.4	61.3	63.31	.446	.499	.489	.475	.87	.72	.92	.84	Calm.	S.S.W.	Calm.	0.110	M'tly cl'd. Thun. 9 to 10 am, also from 9 to 11 pm.
4,	29.428	29.313	29.323	29.3411	64.7	60.8	59.9	61.79	.550	.462	.494	.487	.93	.89	.98	.90	E. by S.	E. by S.	Calm.	0.250	Clouded. Oc. th., l'tning, & r'n all day.
5,	29.325	29.342	29.415	29.3810	55.9	61.4	50.2	53.00	.356	.463	.276	.339	.81	.87	.78	.84	N. by W.	S.S.W.	N.W.byN.	0.345	Cl'd. Slight rain from 7 to 11 h 45 m am
6,	29.486	29.592	29.687	29.6507	49.3	56.7	43.1	51.64	.272	.288	.236	.268	.78	.64	.86	.72	N. W.	N.W.by N	Calm.	0.080	Detach. cl'ds. Sl. r'n at 12h 45m to 1 pm
7,	29.773	29.747	—	—	54.9	62.5	—	—	.325	.363	—	—	.77	.66	—	—	S. S. W.	N. by E.	——	not ap	Cloudy all day.
8,	29.952	29.955	29.982	29.9722	55.4	66.7	49.4	56.47	.274	.381	.285	.227	.64	.60	.82	.72	Calm.	S. E. by S.	N.E.	—	Mostly clear. Hazy. Fine.
9,	30.037	29.951	29.836	29.9169	56.1	69.4	50.3	58.73	.307	.449	.292	.346	.70	.64	.81	.71	Calm.	S. E. by S.	Calm.	—	Clear and unclouded. Very fine.
10,	29.782	29.605	29.551	29.6124	58.7	75 1	60.5	63.98	.357	.581	.411	.442	.74	.68	.81	.76	Calm.	S. by W.	Calm.	—	Unclouded to 4 pm. Rem. overc't, Fine
11,	29.563	29.585	29.694	29.6561	63.6	66.5	62.8	60.52	.421	.493	.349	.399	.73	.77	.89	.75	N.E.by N.	E. by S.	E. by N.	—	Halo round moon 0 am. Clouded all day
12,	29.867	29.899	29.885	29.8815	54.7	61.3	52.5	57.52	.248	.319	.283	.310	.59	.60	.73	.67	N. E.	E.	Calm.	—	Clear and unclouded. Very fine.
13,	29.873	29.818	29.751	29.7466	62.8	64.3	54.8	60.80	.413	.434	.368	.409	.74	.74	.88	.79	E. by N.	E.N.E.	Calm.	—	Overcast, with light haze.
14,	29.693	29.619	—	—	65.5	72.4	—	—	.464	.607	—	—	.76	.78	—	—	Calm.	S. S. E.	——	—	Detached clouds generally.
15,	29.558	29.507	29.550	29.5462	63.7	75.0	66.0	69.18	.483	.535	.404	.489	.85	.63	.65	.70	Calm.	S.S.W.	N. N. W.	—	Mostly clouded.
16,	29.643	29.637	29.616	29.6311	63.4	70.4	56.8	62.72	.417	.488	.396	.433	.73	.68	.88	.78	N. by E.	S. E.	Calm.	—	Cl'd to 8 am. Rem. uncl'd but hazy.
17,	29.649	29.603	29.592	29.6062	62.4	76.8	60.9	67.00	.426	.623	.472	.515	.77	.69	.90	.80	Calm.	S. by E.	Calm.	—	Clear to 4 pm. Rem. mostly clouded.
18,	29.576	29.465	29.422	29.4490	63.5	70.8	68.0	69.56	.535	.645	.605	.637	.94	.88	.91	.90	Calm.	Calm.	W. N. W.	0.015	L'tning 1 & 2 am. Sl't rain 6 am. Heavy thunderstorm from 9 to 11 pm.
19,	29.335	29.241	29.302	29.3025	69.0	80.7	66.5	69.82	.653	.496	.524	.552	.95	.49	.83	.79	Calm.	W. N. W.	N.N.W.	0.765	Dist. th. m't of day. Sl. r'n 10 to 11 am.
20,	29.376	29.469	29.498	29.5039	59.8	59.8	54.4	56.64	.401	.360	.338	.349	.80	.71	.81	.77	N. N. W.	N.W.byN.	N.W.byN.	0.060	Densely overcast all day.
21,	29.512	29.530	—	—	56.2	58.2	—	—	.315	.289	—	—	.78	.61	—	—	N. W.	N. N. W.	——	—	Clouded. Showery all forenoon.
22,	29.681	29.708	29.795	29.7435	55.9	68 4	57.7	60.33	.314	.272	.372	.317	.71	.40	.80	.63	N.W.	N. by W.	Calm.	0.115	Generally clouded. Clear intervals.
23,	29.836	29.756	29.779	29.7818	62.7	75.3	64.0	67.11	.329	.342	.262	.314	.59	.40	.45	.49	N. N. W.	N. W.	N.N.W.	—	Mostly clear. Hazy.
24,	29.818	29.755	29.731	29.7540	64 8	77.8	64 8	70.24	.419	.428	.331	.332	.70	.47	.55	.47	Calm.	W. N. W.	Calm.	—	Unclouded. Hazy. Fine.
25,	29.730	29.643	29.608	29.6384	68.8	80.0	67.6	72.72	.317	.552	.361	.411	.46	.55	.55	.53	Calm.	S. by W.	Calm.	—	Uncl'd to 3 pm. Rem. partially clouded
26,	29.598	29.511	29.495	29.5207	65.3	80.7	68.2	70.34	.402	.505	.528	.495	.67	.49	.79	.69	Calm.	W.	Calm.	—	Clouded all day. Air very close.
27,	29.515	29.502	29.512	29.5113	68.3	68.9	64.0	67.23	.572	.484	.510	.524	.85	.71	.88	.81	W.N.W.	E. N. E.	Calm.	—	Overcast. Hazy. Air very close.
28,	29.544	29.510	—	—	67.4	76.6	—	—	.586	.598	—	—	.90	.67	—	—	E. by N.	E.	——	—	Mostly clouded. Slight spitting rain.
29,	29.553	29.509	29.511	29.5254	65.2	75.7	65.9	69.98	.581	.632	.543	.588	.96	.73	.87	.83	E.N.E.	E. by N.	Calm.	not ap	Mostly clear. Light passing clouds.
30	29.522	29.511	29.504	29.5114	72.6	78.8	71.0	73.05	.608	.572	.537	.583	.78	.60	.73	.74	E.N.E.	E. by S.	E. by N.	—	Mostly cl'r. A few detached cl'ds. Fine
»																					
Mean	29.6191	29.5791	29.5865	29.5939	62.15	70.25	59.63	63.82	.429	.478	.407	.436	.77	.66	.80	.75				1.920	Yellow matter fell with the rain on the 1st, 9 am; 18th, 10 pm; and 19th, 10 am

Highest Barometer, 30.045 at 6 a.m. on 9th. Lowest do. 29.241 at 3 p.m. on 19th. } Range 0.804
Highest Temperature, 84°.2 on 25th, p.m. Lowest do. .. 39°.1 on 7th, a.m. } Range 45.1
Mean Daily Range, .. 18°.46
Extreme Daily Range, 27° .9 on 9th am to pm, & 17th am to pm.

Proportion of Wind from each Quarter--

N.W.	159	Total,	
S.W.	49	Winds,	379
S.E.	89	Calms,	245
N.E.	82		
		Obser.,	624

Mean force, 0.62 lbs; Max. force, 45 lbs, at 9h 55m p.m. on the 18th.

Temperature for June.

Year.	Mean.	Max.	Min.	Range.
1840, ...	60.3°	79.9°	36.7°	43.2°
1841, ...	66.0	93.1	45.3	47.8
1842, ...	66.4	76.0	28.1	47.9
1843, ...	58.94	83.3	23.2	55.1
1844, ...	60.41	83.3	33.2	50.1
1845, ...	61.32	84.6	39.6	45.0
1846, ...	63.82	81.2	39.1	45.1

Rain.

No. Days.	Inches.
11	4.860
9	1.560
15	5.755
12	4.695
9	3.535
11	3.715
11	1.920

Wind.

No. Winds.	Calms	Mean force lbs.
194	118	0.36
196	116	.31
325	300	.27
287	313	.19
328	272	.27
379	245	.32

Under the head of Tension of Vapour, is given the elastic force of the Aqueous Vapour in the Atmosphere at each Observation, in decimals of an inch of Mercury, or the proportion of the Barometric pressure due to its presence.
Under the head of Humidity of the Air, is given the proportion the Aqueous Vapour bears to the quantity the air is capable of sustaining at the existing temperature, saturation being represented by 1.00.
The Instruments are Standard Instruments. The Rain Gauge is 27 feet above the soil.—The Means entered are the Means by 24 hourly Observations, from 6, a.m., to 6, a.m.
The quantity of Rain or Snow received each 24 hours, is noted at 9, a.m., and is marked in inches on the surface.
The Observations entered in the column for 7, a.m., on Sundays, is actually taken at 9, a.m. The two Observations taken on Sundays are not included in any of the means.