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THE  
**BRITISH AMERICAN JOURNAL**

OF

**MEDICAL AND PHYSICAL SCIENCE.**

Vol. II.]

MONTREAL, JUNE, 1846.

[No. 2.

RETURN OF PATIENTS admitted into the Provincial Lunatic Asylum, Toronto, from September, 1844, to 21st October, 1845. With an abstract of Returns from the opening of the Institution, January 21, 1841, to 21st October, 1845. By W. REES, Medical Officer in charge.

Since the last Annual Return, (1st September, 1844, to the 21st October, 1845,) the admissions and re-admissions to this Asylum amount to 80, (54 males, and 26 females. There remained in the Institution on the 1st September, 1844, 69 patients—38 males, and 31 females; being in all 149 patients under treatment during the above period. Of this number 50 have been discharged cured, and 7 have been discharged relieved, or removed by their friends, 17 died, and 75 patients are remaining, of whom 7 are convalescent.

Of the cured, 31 were discharged within three months of their admission. Of the 17 deceased between the 1st September, 1844, and the 21st October, 1845, 12 were old cases, and 5 recent. Of the old cases, 4 died in a state of fatuity, 1 was a congenital idiot, and 1 epileptic. Of the recent cases, 1 died within three days of admission, being brought to the Asylum in a state of inanition.

Since the opening of the Asylum, 331\* patients, including re-admissions, have been received, (some of them idiotic or incurable from other causes.) Of this number 163, or 49<sup>51</sup>/<sub>331</sub> per cent, have been discharged cured; 55, or 16<sup>204</sup>/<sub>331</sub> per cent, have been discharged relieved, or removed; and 38, or 11<sup>159</sup>/<sub>331</sub> per cent. died.

Of the cured, 91, or 27<sup>163</sup>/<sub>331</sub> per cent., were discharged within three months of their admission; 28, or 8<sup>152</sup>/<sub>331</sub> per cent. within six months; 13, or 3<sup>307</sup>/<sub>331</sub> per cent. within nine months, and the remainder from one to four years after admission.

In 107 of the patients discharged cured, the duration of the disease before admission and during treatment, was one year and under; in 16, from one to two years; in 6, from two to three years; and in 5 from three to five years; of the remainder no particulars could be ascertained.

\* 332 are on the Steward's books as admissions and re-admissions; but one patient being removed on the day following her admission, and not being subjected to medical treatment, does not appear in my Returns.

Tables exhibiting the civil condition and other particulars, are herewith subjoined. In regard to the more minute details, the treatment pursued, together with the general economy of the Institution, nothing farther remains to be observed, these matters being contained in the last Report.

ANNUAL RETURN OF PATIENTS admitted, discharged, died, and remaining in the Provincial Lunatic Asylum, from the 1st September, 1844, to the 21st October, 1845:—

Form of Disease.	R'main on 1st Sept'r, 1844.		Admitted.	Discharged cured.		Disch'd relieved or removed.		Died.	R'main convalescent.		R'main under treatment Oct. 21, 1845.										
	Males.	Females.		Males.	Females.	Males.	Females.		Males.	Females.	Males.	Females.	Total.								
Monomania	18	7	25	26	14	40	32	13	35	1	1	3	4	0	4	16	9	25			
Mania, -	10	21	31	33	11	34	10	4	14	1	1	2	3	2	0	2	19	15	34		
Dementia or Idiocy, -	7	2	9	5	1	6	1	0	1	0	2	7	1	9	0	1	1	9	5	14	
Total, -	35	31	69	54	26	80	33	17	50	2	4	6	12	5	17	6	1	7	45	30	75

ABSTRACT OF RETURNS from the commencement of the Provincial Lunatic Asylum, 21st January, 1841, to the 21st October, 1845:—

DATES.	Remaining at the end of each year.	Admitted each year.	Discharged cured.	Discharged relieved or removed.	Died.	Remaining convalescent.	Remaining under treatment.
From the opening of the Institution, Jan'y. 21, 1841, to Sept. 1, 1842.	—	126	59	15	7	15	30
On the 1st Sept., 1842.	45	—	—	—	—	—	—
From Sept. 1, 1842, to Sept. 1, 1843.	—	68	30	23	9	9	42
On the 1st Sept., 1843.	51	—	—	—	—	—	—
From Sept. 1, 1843, to Sept. 1, 1844.	—	57	24	10	5	3	66
On the 1st Sept. 1844.	69	—	—	—	—	—	—
From Sept. 1, 1844, to Oct 21, 1845.	—	80	50	7	17	7	68
On the 21st Oct. 1845.	75	—	—	—	—	—	—
Total, - - - - -	—	331	163	55	38	—	—

TABLES exhibiting the number of Patients, the causes of the disease, the trade or occupation, the religious denomination, and the place of birth of each, as nearly as could be ascertained:—

## No. I.

Causes of Disease.	Males.	Females.	Total.
Chagrin, .....	2	2	4
Cerebral Disease, .....	17	15	32
Disease of Digestive Organs, ..	26	12	38
Irregularities and Depravity, ..	25	16	41
Cold while under influence of Mercury, .....	1	—	1
Reverses in Life, .....	9	7	16
Disappointment in Love, ..	1	2	3
Intemperance, .....	29	15	44
Inordinate Mental Exertion, ..	1	—	1
Domestic Affliction, .....	4	7	11
Fright, .....	5	4	9
Fanaticism, .....	9	7	16
Gambling, .....	3	—	3
External Injury of the Head, ..	6	1	7
Jealousy, .....	2	1	3
Uterine Disease, .....	—	3	3

## No. II.

## Causes of Disease.

Apoplexy, .....	2
Atrophy, .....	4
Bilious Diarrhæa, .....	1
Pulmonary Consumption, .....	5
Dropsy of Chest, .....	2
Inflammation of Brain, .....	14
Chronic Inflammation of Digestive Organs, ..	6
External Injury of Head, .....	2
Inanition, .....	2

## No. III.

AGE and CONDITION of such of the Patients as could be ascertained.

MALES.		FEMALES.	
Under 20 years of age, ..	8	Under 20 years of age, ..	10
Between 20 and 30, .....	76	Between 20 and 30, .....	29
Between 30 and 40, .....	42	Between 30 and 40, .....	36
Between 40 and 50, .....	32	Between 40 and 50, .....	29
Between 50 and 60, .....	11	Between 50 and 70, .....	9

## No. IV.

## Condition.

MALES.		FEMALES.	
Married, .....	77	Married, .....	72
Single, .....	79	Single, .....	39
Widowers, .....	9	Widows, .....	21
	165		132
Orphans, .....	11		

## No. V.

Discharged cured of recent cases.

Duration in Asylum.	
From within three months, ..	91
From within three to six months, ..	23
From within six to nine months, ..	13
From within nine to twelve, ..	11
	148

## No. VI.

Discharged cured of old cases.

Duration in Asylum.	
From one to two years, ..	13
From two to three years, ..	10
From three to five years, ..	6
	29

## No. VII.

## Trade or Occupation of the Patients.

Carpenters, .....	5	Mercantile, .....	6
Blacksmiths, .....	7	Printers, .....	1
Bricklayers & Plasterers, ..	9	Schoolmasters, .....	4
Tinsmiths, .....	3	Labourers, .....	63
Tailors, .....	4	Seamstresses, .....	5
Shoemakers, .....	7	Servants, .....	9
Weavers, .....	1	Pilot, .....	1
Tavern keepers, .....	2	Farmers, .....	7
Pedlars, .....	4	Shipwrights, .....	1
Dyers, .....	1	Medical, .....	3
Butchers, .....	2	Military, .....	1
Soldiers, .....	5	Law, .....	1
Plumbers, .....	1	Divinity, .....	1
Tanners, .....	2		

## No. VIII.

## Religious Denomination of Patients.

Church of England, .....	33	Natives of England, ..	68
Roman Catholics, .....	65	“ Ireland, .....	138
Presbyterians, .....	44	“ Scotland, .....	32
Methodists, .....	42	Canadians, .....	28
Baptists, .....	8	French Canadians, ..	6
Menonists, .....	2	Germans, .....	5
Universalists, .....	1	Americans, (six were people of colour,) ..	9
Jews, .....	1		

## No. X.

RETURN of the DISTRICTS from whence the Patients have been sent to the Asylum.

DISTRICTS.		DISTRICTS.	
No.		No.	
Home, .....	69	Western, .....	6
Gore, .....	20	London, .....	7
Newcastle, .....	23	Eastern, .....	4
Niagara, .....	20	Dalhousie, .....	2
Midland, .....	15	Bathurst, .....	9
Wellington, .....	8	Victoria, .....	3
Simcoe, .....	13	Colborne, .....	3
Johnstown, .....	12	City of Toronto, .....	83
Brock, .....	5	Canada East, .....	1
Huron, .....	4		
Talbot, .....	3	Total, .....	310

N.B. No information received respecting the remaining 21.

WM. REES.

Toronto, 1st December, 1845.

## POISONING BY CAMPHOR.

By THOMAS REYNOLDS, M.D., Brockville, C.W.

Mr. C., ætat 20, of a healthy constitution, and full habit, was standing in a shop where a druggist was breaking up cakes of camphor to put up in bottles. Talking to a bystander, he began to eat the crumbs of camphor, and unconsciously swallowed, bit by bit, probably from one to two drachms in the course of a few minutes. Feeling a degree of headache coming on suddenly, and without thinking of the cause, he went to the open air, felt greatly exhilarated, met a friend in the street with whom he proposed to have a rubber of whist. Upon reaching his lodgings, he said he felt unusually clear-headed, and felt quite confident that he could play a capital game. Soon after sitting down, his gestures and conversation became very strange and wild. Leaving the room suddenly, he retired to his

bedroom adjoining, and returned, to the no small astonishment of his friends, naked and dancing wildly about, and attempting to jump out of the window. I was sent for, and upon questioning him, found that he had been eating camphor, as described above. I found him in a state of great excitement, almost amounting to phrenzy, his pulse 180 and small—conjunctiva injected—pupil not much dilated, scarcely sensible to light—countenance pale and haggard—breathing hurried, and at times greatly laboured—a frequent desire to make water, with some pain in the course of the spermatic vessels—urine quite clear, but having, as well as the perspiration, a very strong odour of camphor—a clammy sweat breaking out over the body. Drachm doses of vinum opii, which happened to be at hand, were administered every fifteen minutes. After the third dose there was a tendency to vomiting, which was freely encouraged by giving tepid water and vinegar. Some of the camphor was thrown up with the contents of the stomach. After the vomiting, drowsiness came on; but as the pulse was still very small, and the respiration hurried, it was thought advisable to keep him awake, and keep up the administration of the vin. opii. in doses of ʒss. every twenty minutes. After a few doses the pulse became fuller and less frequent—the countenance much less anxious—the respiration less hurried, and he was allowed to fall into a sleep, in which he continued for about three hours, starting at intervals, but becoming gradually composed. When he awoke, he had but a very confused idea of what had occurred; recollected something about camphor, and asked “What have I been doing? Have I been making a fool of myself?” &c. There was very little headache or stupor after the opium, but the stomach and bladder were irritable for a few days. These and all other unpleasant symptoms gradually disappeared after the use of a few bottles of Caledonia water. For some days he complained that he could not take his usual glass of wine at dinner, without feeling the effect upon his head; this would probably arise from the action of the camphor on his brain, as well as upon the other organs of the body. He described the sensation while under the influence of the camphor as most exhilarating, but gradually becoming oppressive. From the quantity of camphor taken, I have very little doubt this might have proved a fatal case, but for the timely use of the opium; and as wine is recommended in these cases; perhaps the vinum opii. is one of the best forms for its administration.

## POISONING BY CORROSIVE SUBLIMATE.

To the Editors of the British American Journal of Medical and Physical Science.

The subjoined memoranda of a case of poisoning with the bichloride of mercury, I transmit to you for publication, if you consider them worthy of it, in the hope that they may prove beneficial to any brother practitioner, should a similar case ever occur to him. The unusual features of this instance, are the shortness of time that elapsed from the reception of the poison into the stomach, to the fatal termination, and the total absence of circumstances to lead to the suspicion of poison at the first appearance of the symptoms.

THEOPHILUS MACK, M. D.

*St. Catherines, May 7, 1846.*

Upon my return from the Country on the afternoon of the 1st April ult., I found a messenger from Samuel Stinson, Innkeeper of this Town, who stated Stinson was suffering extreme agony from having swallowed that morning two ounces of Epsom salts, which he had purchased at a grocers, and requesting my immediate attendance. I accompanied the messenger to Stinson's house.

The patient was about forty years of age, dark complexion, slightly intemperate in his habits, had been married seventeen years, with issue, and had previously never been affected with any serious disease. He told me that his bowels had been relaxed, and gave me this as a reason for having taken the salts. He expressed his conviction of approaching dissolution, and desired that the salts should be examined. He was constantly moaning, and complained of burning heat at the scrobiculus and stomach and pharynx, his face was flushed, expressive of intense suffering, and swollen, his voice was husky, deglutition painful, constant vomiting of bloody mucus with other contents of the stomach. He had slimy evacuations mixed with blood, and finally dysenteric; complained of dysuria, and the catheter produced a scanty discharge of bloody urine; pain on pressing epigastrium; extremities cold; clammy diaphoresis; pulse small, senses perfect, and heart's impulse weak. Staff Surgeon J. Mair, M. D., who was in attendance, informed me that at 10 o'clock, A. M., he found the patient as I have described, and upon inquiring the cause of his illness he had been told that it was consequent upon taking, a short time before, two ounces of epsom salts mixed with beer, and a portion of the salts were shewn to him and Dr. Carson who had also been sent for. Tasting and inspecting these they had considered them pure Crystals of the ordinary Sulphate of Magnesia of commerce; they had then administered cautiously, from the impression that the medicine might have produced severe symptoms from having been swallowed imperfectly dissolved in beer; chalk was then given as an antidote

to oxalic acid. After my arrival, stimuli were exhibited, upon the grounds that the symptoms might be accounted for from the salts having been taken on an empty stomach, excessively irritable from a recent debauch. These modes of treatment proving ineffectual, we suspected the symptoms to be caused by corrosive poison, and the whites of eggs, with copious draughts of milk were ordered. The debility, and other symptoms increased, and the patient expired in about twelve hours from the time he had taken the epsom salts.

*Section cadaveris thirty-six hours after death.*

The body was about the medium stature and muscular; countenance unaltered since death, lips red. The tips of the ears and the nails were livid, abdomen depressed. The thoracic viscera were unaltered, and the heart and its membranes presented no lesion, there was a slight transparent adhesion of the pleuræ at the apex of left lung. Viewing the contents of the abdomen in situ, the liver appeared paler than usual, and its structure was softened. The gall bladder distended with bile. The peritoneal coat of the stomach was vascular and livid, in some places a dark patch at the greater curvature, the trunks of the vessels here were filled with dark blood. This organ was diminished in size, and contracted near the pylorus, where it felt much thickened. The peritoneum was much injected; the portion investing the intestines had a pink blush, becoming darker at the sigmoid flexure with livid spots interspersed upon the ileum, small intestines, and left curvature of the colon. The omentum was vascular, the bladder shrunk. A livid streak extended along each side of the tongue, the papillæ at its base were enlarged, the mucous lining of the labium inferius was darkened, softened, and corroded. In the pharynx at the angles of the cricoid and thyroid cartilages were dark spots resembling effused blood beneath the epithelium, which was abraded and easily torn off; the inner surface of the epiglottis and tracheæ appeared inflamed. The stomach was carefully removed and opened along the lesser curvature, the contents measured about  $\frac{3}{4}$  iv. of a greyish brown colour. This viscus was much inflamed at the cardiac extremity, the mucous membrane extending from this orifice to the centre of the greater curvature was softened and easily removed; of a bronze hue, interspersed with stellated patches coloured dark red. At the pyloric extremity of the inferior curvature, we found a space of an irregularly oval shape, about six inches in circumference, very much altered and disorganized, the central part of an ash colour, corrugated, with a dark olive margin. The intestines were cut open and their contents preserved; dark spots were observed in the colon, at the caput coli, and in the ileum. The intestinal mucous membrane was highly injected throughout, and the duodenum inflamed.

We carefully secured the stomach, contents of the stomach, and of the intestines, in bottles sealed and labelled for further examination, and an inquest which had been summoned, returned a verdict of death by poison.

The bottles with their contents were sent with a trustworthy person, furnished with letters of transmission, to be minutely examined by the professor of chemistry, in the University of King's College, Toronto, who, after a careful analysis, was enabled to obtain globules of mercury. Coupling this with the appearances post mortem, he, with his colleagues certified that death was caused by corrosive sublimate. Upon the receipt of this document, a second inquest was summoned by the coroner, Dr. Raymond, and after three days deliberation and investigation, the jury promulgated the following verdict:—

The deceased Samuel Stinson died from the effects of poison, administered to him in a dose of epsom salts, by his wife, and that Henry Byron *alias* Holmes, was an accessory before the fact.

The parties suspected, were tried at the Niagara District Court House, and acquitted, from insufficient evidence of the fact of the poison having been mixed with the draught, by the female prisoner. On the trial, it was proved that Stinson's wife had been living in adultery with Byron, for some years. Portions of salts had been taken by several individuals, from the same package, without causing any unpleasant consequences, and it was shown that no one but his wife had access to the dose from the time it was purchased until it was taken.

(We give insertion to the above, at the request of Dr. Mack. It is certainly a case which portrays in a most vivid manner, the imperative necessity of a knowledge of chemistry to every medical practitioner. An acquaintance with the laws of that science, would, in a minute, have afforded the means of detecting unequivocally the nature of the poison swallowed, and have indicated the antidote.—Eds.)

**ANALYSIS OF THE TUSCARORA SOUR SPRING,  
NEAR BRANTFORD.**

By HENRY CROFT, Esq., Professor of Chemistry, King's College  
Toronto.

A very remarkable spring is situated near Brantford, it is called the Tuscarora Sour Spring, and is exceedingly interesting from its containing free sulphuric acid. Such Springs are very rare, and I will briefly notice the information which I have been able to procure concerning those already known.

Bergman mentions a mineral water at Latera, near Viterbo, in the Ecclesiastical States, which is remarkable for containing free sulphuric acid. Another similar one exists at Selvena, near Siena.

When Humboldt visited the town of Popayan, and ascended the volcano Puracé, which was close to it, he found a considerable stream at the height of 8136 feet, which there forms three large cataracts. The water is so strongly impregnated with sulphuric, and hydrochloric acids, as to cause the spray from the cataract to have a disagreeable effect upon the eyes of persons at a considerable distance. The stream runs into the river Cauca, and kills or drives away the fish for several miles down. The sources of this stream lie at the height of 11,200 feet, and it is called by the inhabitants the Rio Vinaigre. The water was analysed by Boussingault and Rivero, and they found in the litre—

Sulphuric acid, .....	1.080
Hydrochloric acid, .....	0.184
Alumina, .....	0.240
Lime, .....	0.160

According to the accounts of Leschenault de la Tour, similar streams are to be found in Java.

Professor Daubeny in his report on Thermal and Mineral Springs, says—"Hydrochloric and sulphuric acids in a free state, are found only in Springs connected with volcanoes, to which they are clearly referable."

Before I proceed to describe the experiments as yet made, I must beg you to consider this notice as nothing more than a rough sketch. I hope to be able to visit the locality myself this summer, and to obtain ocular information respecting several points, concerning which I have received very conflicting statements.

The water, as I have received it, is clear and colourless, of a strongly acid taste and reaction. Specific gravity 1.0038, at 60° Fahrenheit.

The addition of a solution of chloride of barium, produces a white precipitate insoluble in acids, showing the presence of sulphuric acid.

Nitrate of silver does not produce the least change.

Ammonia precipitates a reddish brown flocculent substance, sesquioxide of iron, and perhaps alumina.

Oxalate of ammonia added to the filtered solution, gives a white precipitate, lime.

Phosphate of soda, and carbonate of ammonia, added to the solution filtered from the oxalate of lime, gives a slight crystalline precipitate, magnesia.

Sulphocyanide of potassium produces a red colour, showing that peroxide of iron is present.

Ferrocyanide of potassium produces a dark blue precipitate.

Ferridcyanide of potassium produces only a green colour, showing that little or no protoxide of iron is present.

The quantities of sulphuric acid found in three analyses, in one pint, (7680 grs.) were—

	I.	II.	III.	Mean.
	Grains.	Grains.	Grains.	Grains.
Sulphuric Acid, ...	21.630	23.597	22.049	22.425
Sesquioxide of Iron	4.070	3.831	—	3.950
Magnesia, .....	—	—	—	1.581
Lime, .....	—	—	—	3.685

One other experiment gave the lime much higher, viz., 7.68, which is probably incorrect.

No experiments have yet been made to detect alkalies, nor to determine whether alumina be present or not.

The water, therefore, contains a considerable proportion of free sulphuric acid; for if we calculate the quantity required to neutralise the bases, we shall find that it does not amount to much more than half the quantity found. It is apparently owing to the presence of this acid, that the water has been found to be serviceable as a medicine.

The presence of sulphuric acid in Springs, arising near active or extinct volcanoes, such as those in Java and South America, may be easily accounted for, but in the present case it would appear as if the acid were produced by the slow oxidation of some sulphuret of iron. If such were the case, sulphate of the protoxide of iron would be first formed; this by exposure would be converted into the double sulphate of the protoxide and sesquioxide of iron, and sexbasic persulphate would be precipitated.

A red substance is said to abound near the Spring, and should this prove to be the above salt, the foregoing explanation would be rendered probable.

The analysis of this substance, as well as a more careful examination of the water itself, and the gases contained in it, will form the subject of a second communication.

[Mr. Dr. Rotterdam has announced that this spring water contains *antimony*. We beg to call Professor Croft's attention to this; we made unavailing attempts to get possession of some of this water some years ago for analysis.—A. H.]

Toronto, April 1846.]

Report of the Pennsylvania Hospital for the Insane, for the year 1845. By THOMAS S. KIRKBRIDE, M.D., Physician to the Institution. Published by order of the Board of Managers. Philadelphia, 1846.

"The Pennsylvania Hospital for the Insane" is another of those magnificent institutions, for the reception of insane persons, which proclaim in loud language the philanthropy of the Americans in this respect. It is, in reality, a branch of the Pennsylvania City Hospital; into which, in the city of Philadelphia, insane persons were formerly admitted. This hospital was founded in the year 1752, but in 1841, a new building having been erected for their separate accommodation, about two miles west of the city, the insane were removed into it. It appears that, before the separation alluded to, 4336

insane persons had received treatment; and the present report, after briefly alluding to the particulars connected with the patients admitted during the last year, contains some important statistical information, based upon the whole number of cases admitted since the year 1841.

At the date of the last report there were 151 patients in the Hospital; and there were admitted during the year 177, giving us the number of 328 who had received the benefit of treatment. Of these 159 have been discharged or died, leaving 169 under treatment at the commencement of the present year. The discharges are thus accounted for, cured, 80; much improved, 5; improved, 24; stationary, 30; died, 20=159. This mortality, although high, amounting to 1 in 8<sup>17</sup>/<sub>20</sub> is accounted for by the unusually great number of patients admitted, labouring under organic disease.

One of the chief characteristics of the present century is the superior treatment of insanity—in the abolition of those modes of restraint which were formerly so much in use, and which have been too frequently the means of perpetuating a calamity in an unfortunate individual, which a milder treatment would most probably have mitigated, if not entirely removed. The striking benefits resulting from this absence of restraint, cannot be more forcibly depicted than in Dr. Kirkbride's own words:—

“In reference to the admissions of the past year, I may remark, that in addition to the greater number of individuals labouring under organic disease, already referred to, there have also been many, curable and incurable, who while at home, had been subjected to peculiarly rough and violent means of restraint, supposed to be necessary for their own safety or that of the community. On not one of these, after reaching this hospital, has there been the least restraining apparatus of any kind. In numerous instances those who at home had been heavily ironed—whose movements had been limited to the extent of the chain which secured them, and who were shut out from every thing likely to soothe their malady—before they had been in this Institution more than a few weeks, were to be seen during the day, usefully employed in the garden, about the grounds, or in the workshop, and in the evening, quietly reading or listening to the reading of others in comfortable parlours, engaging in different kinds of amusement, or attending lectures or parties.

“The number of this class has been gradually increasing each year since the opening of this hospital, and particularly from the more distant parts of our own commonwealth. It is another proof that our Institution is becoming better known, and the true character of well-regulated hospitals better understood. It is a proof, too, that a healthful feeling begins to pervade the community, which will not, as heretofore, permit any class of our afflicted fellow-beings, to be subjected to forms of treatment often far worse than that given to the idle pauper or even the abandoned felon.

“Many of these cases have returned home perfectly well, and each one that does so, effects more in enlightening a whole neighbourhood than volumes of essays or scores of statistical tables. It is an argument which none can resist.

But we have already remarked that a very important part of the report is occupied by the statistics of the ad-

missions of the last five years, viz., the years 1841, '42, '43, '44, and '45. These results are valuable, and appear to be well worthy of record. It is impossible for us, however, to follow the author of the report through all the tables which he has furnished; we shall make such selections as appear most valuable.

The total number of cases admitted for the five years was 769, being 447 males, and 322 females; and the age of more than the half of whom was between 20 and 30; the number being 274; and this ratio is consonant with general experience. The general results, as far as age is concerned, are thus given:—

The number of persons becoming insane, when between twenty and thirty years of age, is shown by the records of all our institutions, to be much greater than during any similar period of life. For example, between ten and fifteen, we had but eleven admissions, between fifteen and twenty we had eighty, making ninety for the ten years; while between twenty and thirty, three hundred and thirty four are reported; between thirty and forty, one hundred and sixty-seven; between forty and fifty, one hundred and thirty-four; between fifty and sixty, thirty-nine; between sixty and seventy, ten; and between seventy and eighty, four. It must be remembered, however, that the number of persons in the community between twenty and thirty years of age is actually greater than of either of the other ages designated, except between ten and twenty. Insanity is obviously of rare occurrence before fifteen; we have never had a patient here under ten, and the youngest case of the disease I ever had under my own care, was eight years old, although it does sometimes occur earlier in life, and well attested cases are reported by writers of its existence even in infancy. Between fifteen and twenty, many cases are seen, but after twenty their frequency is much greater.

With reference to social condition, the results are as follow:—

	Males.	Females.	Total.
Single . . . . .	269	136	405
Married . . . . .	152	139	291
Widows . . . . .	—	47	47
Widowers . . . . .	26	—	26

Other tables are given, in which the influence exerted by occupation, by supposed causes of the insanity, by the ages at which the disease supervened, &c., &c., are exhibited, but the results of these we pass over, for the purpose of examining the statistics of the mortality at this institution; and we glean these general results from tables constructed for the purpose of exhibiting the *monthly* mortality, discharges, and cures, during the period over which the observations extend:—

	Admissions.	Discharges.	Cures.	Deaths.	Ratio of deaths.
1841	176	61	30	9	1 a 19 55
1842	123	120	60	12	1 a 10 25
1843	143	126	68	17	1 a 8 23
1844	153	134	75	12	1 a 12 75
1845	177	159	80	20	1 a 8 85

Giving us a mean ratio for the five years of 1 a 11.92, or a per centage of 8.38. The recoveries for the respective years are severally 1 a 5.86; 1 a 2.5; 1 a 2.05; 1 a 2.04; 1 a 2.21; yielding an average of 1 a 2.93, or 34.12 per cent.

The average cost of each patient per week during the five years was \$3.85; \$4.44; \$3.88; \$3.64, and \$3.47½, affording an average of \$3.85 for each patient; omitting, in our calculation, the fractional part of a cent.

With reference to the varieties of insanity, in its different types, the following table affords a summary of the prevalence of the disease at this Institution in its several forms. The observations again extend over five years:—

Showing the forms of Disease for which 769 patients were admitted.

	Males.	Females.	Total.
Mania . . . . .	208	165	373
Melancholia . . . . .	82	61	143
Monomania . . . . .	76	52	128
Dementia . . . . .	76	43	119
Delirium . . . . .	5	1	6

We may observe that no cases of mania a potu, or delirium tremens, are admitted into this institution—such cases being referred to the parent institution in the city of Philadelphia.

We regard the report as a really valuable document, affording evidence of the sound views, the industry, and judgment of the author.

*Twenty-eighth Annual Report of the Physician, and Superintendent of the McLean Asylum for the Insane, to the Trustees of the Massachusetts General Hospital. By LUTHER V. BELL, M.D., Physician and Superintendent. January 1st, 1846.*

This is a report from another of those valuable institutions for the Insane in the United States. It is the third with which we have been favoured; and is characterised by clear and sound views of the peculiar treatment to which this class of patients should be submitted.

It appears from the report, that 271 patients have received the benefit of the Institution during the past year, 139 of whom were males, the remainder females. Comprised in the above number are 119, 64 males and 55 females, admitted during the year, leaving 120 inmates at the date of the report.

The following is a recapitulation of the discharges:—Recovered, 74; died, 13; removed by their friends, 33.

Dr. Bell's views of the propriety or impropriety of restraint are thus detailed:—

“Among modern attempts to improve the management of the Insane in Great Britain, the use of all measures of muscular restraint takes a prominent place, and has in its various aspects and relations, been the

topic of much valuable and much discreditable discussion in that country. My views in regard to the inexpediency of laying down the abolition of restraints of this description, as an invariable law in all institutions, and in a country like ours, where no popular sentiment, originating in abuses, demands such a course, have been fully presented in the reports of former years. No reason has presented itself, as these measures have been matured and tested by time, for any essential change of opinion, although I am willing to admit that it has been found expedient to make the exceptions to a general rule of this kind, far less numerous than formerly would have been believed practicable, in an institution having always a ratio of active cases so much greater than the foreign hospitals, and in a country where the type of disease, on an average, is so much more intense than in Europe.

“Personal exchange of opinion with many of those abroad, who have identified themselves with this measure, has led to the conviction that the differences of views for and in opposition to the rule of non-restraint, have not been so wide and irreconcilable as they would appear to be in a controversial contest, to an unimpassioned searcher for truth. No practical man there would probably be found who would wish to go so far as to say, that there is no case in which muscular restraint might not be the wisest and kindest measure to be adopted. The sentiment appears to be rather this: that the dangers of occasional unfortunate results from omitting restraints to the insane hitherto thought to require them, are less on the whole than the objections to their use and the hazards of abuse, if employed by delegated authority, as must be the case in the extensive foreign hospitals, if they are used at all.

“In the last annual report, the results of the efforts here to bring the use of restraining measures to a smaller limit, were presented. It was there stated that during the three quarters of the year, after a memorandum of the fact was entered, only a single application of restraint was made on the male side of the house, viz., a muff to the hands of a man afflicted with a violent propensity to destroy his eyes, and in a few instances to females. During the present year, a continuance of the same memorandum affords the gratifying information, that a single patient only has been placed under any restraint of this kind, and that to guard against the hazard of self-destruction, which the ordinary means of watching by the presence of an attendant were not adequate to prevent. An epileptic young man has, at times, sat in Dr. Rush's tranquillizing chair, (an arm chair with a board across the front,) to prevent sudden falls.

“While thus able to present almost a clear page as regards restraining measures, I do not recede from the views formerly expressed of the inexpediency of a dogmatic or exclusive rule, especially if that rule is to be known by patients as a law of the institution, and mischievous advantage taken of it, which as I found, was a source of great inconvenience in the institutions of Great Britain. Yet I do not believe that the use of restraining measures to control the muscular movements of patients in this institution, will probably ever exceed two or three cases per annum.”

The total annual expense of the institution for the



year, including the salaries of the officers, &c., was \$26,104, giving an average weekly expense to each patient of \$1.8, which appears to us remarkably low, when compared with that of the sister institution of Pennsylvania.

*The Illustrated Botany*, edited by John B. Newman, M. D., comprising the most valuable native and exotic plants, with their history, medicinal properties, &c.; to which is added an introduction on Physiology, and a view of the Natural and Linnean systems. Vol. 1.—Nos. 1, 2, & 3. Published by J. R. Wellman, 118 Nassau Street, New York.

This is designed to be a popular work on Botany, and judging from the specimens before us, it appears to be in the hands of a gentleman every way qualified to fulfil what he has undertaken. Along with a botanical, historical, chemical, medicinal, and popular account of the plants, to which is superadded the peculiarities of their cultivation, there is given in each number four or five plates, each containing a group of those treated of, and which are coloured in a most exquisite and highly finished manner. These alone are worth the whole price of subscription. The work not being a purely scientific one, but, if we may use the term, a mixture of scientific and literary, all criticism on it as a scientific production, exclusively, is disarmed. In a literary point of view, however, it has high merit, and both its literary and scientific character are so harmoniously blended, the *dulce* with the *utile*, as conjointly, with the artistical execution, very highly to recommend it to general favour. It is published monthly, at three dollars per an.

## PRACTICE OF MEDICINE AND PATHOLOGY.

### ON SULPHURIC ACID AS A REMEDY FOR POISONING BY LEAD.

By J. HENRY BENNETT, M. D.

*Licentiate of the Royal College of Physicians, London; Obstetric Physician to the Western General Dispensary; etc. etc.*

In the Foreign Department of the *Lancet* for last year, (vol. i. p. 607), there appeared an article by M. Gendrin, the celebrated physician to the Pitié Hospital, Paris, on the preservation of the health of those who work in lead and its preparations. In this article, it is asserted that sulphuric acid not only preserves the workmen who take it from the diseases which follow the absorption of lead into the system, but that it is also a curative remedy of great energy and efficacy in the treatment of these affections. From its being known to many persons that I was long the pupil and house physician of M. Gendrin, I have been often questioned on the subject, and this has induced me to present the following remarks.

The opportunities afforded by the hospitals of Paris for the study of the diseases occasioned by the introduction of lead into the human economy are considerable, owing to there being in that city several large manufactories of the oxides and salts of lead; and owing, also, to a great number of cases being continually furnished by various trades in which lead or its preparations is used, such as shot and printing-type

foundries, potteries, china and crystal works, house-painting, black-dyeing of horsehair stuffs, glazing of visiting cards, &c. During the last few years, the attention of various French pathologists has been much directed to saturnine diseases; and, thanks to the facility for research thus afforded, much has been done to increase our knowledge of their causes, symptoms, and progress. The therapeutics of saturnine affections, however, have not improved so rapidly in their hands as their pathology, which is the more to be regretted, as the truly important discovery of M. Gendrin, with respect to the value of sulphuric acid as a therapeutic agent, has not met with that cordial reception to which it is justly entitled. M. Gendrin's views were, in fact, received with decided hostility by several of the physicians who, by their researches, have connected their names with these diseases—a circumstance which has tended to retard the general adoption of the remedy that he was endeavouring to introduce into practice.

M. Gendrin was first led to try the administration of sulphuric acid in colica pictonum, by the success which he found to follow the administration of alum. This substance has long been used in the treatment of lead colic, especially, I believe, in Germany; and was tried and much-talked of in Paris about twenty years ago. Finding it succeed, M. Gendrin concluded that the active agent was probably the sulphuric acid, and on administering it alone, he found himself correct in his surmise. It was in 1830 that this occurred, and since then he has treated by sulphuric acid alone between four and five hundred cases of saturnine disease, in all the forms under which that affection is susceptible of manifesting itself, and with nearly invariable success;—the only exceptions being, if I am not mistaken, a case or two in which the patient died of cerebral or epileptic phenomena before the treatment was well commenced; and a few cases of incurable paralysis, the result of repeated previous attacks.

During the three years that I was with M. Gendrin, I saw a vast number of cases of lead colic; we had, indeed, nearly always two or three men thus affected in our wards, sent from the carbonate of lead manufactory at Clichy. All of these cases were treated with sulphuric acid, and I do not recollect having seen one in which the disease proved refractory to the treatment adopted,—a case or two of confirmed chronic paralysis excepted. The duration of the treatment, as far as I can collect from my notes, was about three days in slight cases, and six or seven in severe ones. The sulphuric acid was given, largely diluted with water, (forty-four drops to a pint of water); two or three pints being administered in the twenty-four hours. The amount of pure strong acid taken in that time was, therefore, from one drachm and a half to two drachms. Sometimes the sulphuric lemonade, as it was familiarly called, was vomited as soon as ingested. Still, when this was the case, the patient was made to persevere in its use, and the stomach soon became accustomed to the acid, and retained it. When it was retained, the abdominal pains generally began to diminish after the first, second, or third day, the constipation soon giving way naturally, after they had become less intense. In all these instances, not a grain of any kind of medicine was given besides the sulphuric acid, nor was an enema used, the sulphuric acid being the only medicinal agent resorted to, if we except baths.

At the commencement of the treatment, a sulphur bath was given to the patient, the result of which was, that the sulphur, combining with the particles of lead that were on the skin, formed a black sulphuret. The amount of lead, which is thus discovered to encrust, as it were, the skin of those who have worked at preparations of lead, is nearly incredible. I have often seen men go into the sulphur bath quite white, and come out nearly as black as negroes. The lead lying on the skin having been thus made visible to the naked eye, the patients were supplied with a hard brush

and half a pound of soft soap, and made to scrub themselves daily in a warm bath, until all the black sulphuret had been brushed off. The sulphur bath was then repeated, the sulphuret of lead brought out, brushed off, and the process renewed, until it no longer rendered visible any trace of lead.

This precaution is indispensable with all who labour under saturnine disease, if we wish to ensure patients against relapse. Whilst at the hospitals of La Pitié and Saint Louis, I have repeatedly had patients under my care with lead colic, who had been discharged as cured from other hospitals a few weeks previously. The sulphur bath, which exhibited a thick coating of lead on the skin, explained at once the cause of the relapse. Indeed, the presence of this coating of lead on the surface of the body is, no doubt, the principal cause of the relapses which are mentioned by authors as occurring so often in these diseases. The lead which thus lies on the surface is gradually absorbed, and, at last, poisoning having again taken place, all the symptoms to which it gives rise are manifested. No patient who has suffered, and been treated for lead colic, can be considered safe unless he has gone through the ordeal of a sulphur bath, with a perfectly white skin. One of the great advantages of repeating the sulphur bath during the treatment is, that the patients, whom it is easy to convince of the importance of getting rid of the metallic poison when they see it plainly on their bodies, rub with real good will.

The mode in which the acid acts in neutralizing the poisonous effects of the lead is easy to explain. It combines, no doubt, with the lead in the tissues, and forms with it an insoluble sulphate or sulphuret, which is consequently inert, and is gradually eliminated from the economy. This is the interpretation adopted by M. Gendrin, and it appears rational enough.

Some of M. Gendrin's opponents have asserted that it is not by the sulphuric acid that he cures his patients, but by the sulphur baths which he simultaneously uses. I attach great importance, as does M. Gendrin, to the sulphur and warm baths, for the reasons given above, but I do not think that they are the active agents in neutralizing the effects of the mineral poison contained in the economy. This opinion, moreover, is founded on the results of my own experience. Whilst at Saint Louis, I saw some half dozen cases of colica pictonum treated by sulphur and alkaline baths alone, by one of the physicians to that hospital, who believed that this treatment was sufficient to effect a cure. The patients were under my charge, so that I had every possible opportunity of observing them. They got well, it is true, but after very long and protracted suffering. In one instance, the constipation lasted ten days, and at one time the symptoms assumed quite an alarming aspect. The result of the treatment, (or absence of treatment) in these cases, satisfied me that sulphuric acid, given internally in saturnine disease, is really a most powerful therapeutic remedy, and that, in the cases in which I had previously seen it administered, the patient did not get well by means of the use of baths, or through the sole efforts of nature, but owing to the therapeutic agency of the sulphuric acid.

The treatment still resorted to by the greater number of the Paris physicians is a combination of purgatives and opiates. The singular series of purgatives, known under the name of *traitement de la Charité*, is yet followed by many. I have repeatedly seen these modes of treatment tried, both in private and in hospital practice, and always, it has appeared to me, with a less satisfactory result than when sulphuric acid alone is exhibited. Indeed, my confidence in the therapeutic powers of this remedy is so great, that I never think of using any other when called upon to treat a case of lead colic. The simplicity of the treatment certainly much enhances its value. Nothing can be more troublesome and more trying to the patient than the continued

medicine and injection taking which many practitioners consider themselves bound to prescribe. The duration of the treatment being, also, evidently shorter under sulphuric acid than when purgatives and opiates are resorted to, from the poison being sooner neutralized, there is less danger of the patient falling a victim to those frightful cerebral epileptic attacks, which constitute one of the chief dangers of saturnine diseases.

Not only is sulphuric acid a most valuable therapeutic remedy, but it has also proved an equally valuable preservative agent, which is the case with no other preparation. At the carbonate of lead manufactory of Clichy, M. Gendrin prevailed on the directors to insist on the workmen drinking every day one or two glasses of the sulphuric lemonade, and also washing themselves well, daily, with soap and water. It was found that these precautions enabled them to work with impunity for many months, although without them a few weeks' labour in the manufactory sufficed to bring on an attack of the lead colic. This result is one of extreme importance, both to the workmen and to the manufacturers. At the establishment mentioned, (that of Clichy,) a very large proportion of the workmen are invariably attacked with these symptoms of poisoning, in from three to six or eight weeks after their entrance. This fact being generally known, no workman will, or indeed can, labour regularly at the manufactory. Its population is entirely composed of men who have been out of work until they have exhausted all their resources. Scores of times have my patients at La Pitié said to me, "I knew, Sir, that I should fall ill in a few weeks, but what could I do? I was starving." Such a state of things, on the other hand, is extremely prejudicial to the manufacturers themselves. Their works are often at a stand for want of hands; the workmen whom they do obtain are inefficient, from ignorance of the processes that have to be gone through, and no sooner do they acquire a tolerable acquaintance with their duties than they fall ill, and are obliged to go to the hospital.

The use of the sulphuric lemonade alone is not sufficient to guard against the appearance of the disease, although it will retard it; the skin must be well and daily cleansed. Indeed, it would be well if a sulphur-bath were used occasionally, in order to demonstrate the state of the skin. The facts which I have already mentioned prove that absorption of lead, and of its preparations, by the skin, is one of the principal means by which the economy becomes poisoned—a fact which has been denied by several pathologists.

On some future occasion I may trouble my readers with a few remarks on the pathology and symptoms of saturnine affections. For the present, however, I shall conclude this short article by expressing the hope that it may be the means of inducing, on the one hand, medical practitioners in this country to try sulphuric acid in the treatment of lead colic, and, on the other, manufacturers of the salts of lead to test its efficacy as a preservative.—*Lancet*.

## MEDICAL JURISPRUDENCE.

### MEDICAL PRACTITIONER INDICTED FOR MANSLAUGHTER.

At the recent assizes, held at Stafford, Mr. Dickenson, a medical practitioner, residing at Bilston, was indicted for the manslaughter of Mrs. Hickman, the wife of a respectable farmer, whose death it was alleged, he had occasioned by want of due skill and care at the time of her confinement.

From the evidence, it appeared that the deceased, a young woman in the prime of life, was unexpectedly seized with labour pains, whereupon she was supported to her room, and, without being undressed, was laid upon a bed. An old midwife was sent for, who speedily arrived, and assisted at the birth of a child, which almost immediately took place, followed by a considerable

flow of blood from the uterus. In order to stop the discharge, the old woman applied cold wet cloths to the abdomen of the patient, and thus, for a time, caused the hemorrhage to cease; but as several symptoms manifested themselves, which alarmed her, she despatched a messenger for Mr. Dickenson, who resided about a mile and a half from the spot, and who arrived without a moment's delay. Upon his entering the room, the quantity of blood which the poor woman had lost was pointed out to him, and he proceeded, as is usual in such cases, to ascertain the position of the placenta. After some manual investigation, Mr. Dickenson succeeded in withdrawing from the vagina a good deal of coagulated blood, together with what he maintained to be the greater part if not all, of the placenta. On the arrival, however, of Mr. Best, another medical man, whose services had also been put in requisition, he was shown the vessel containing the above discharge, and after examining it, he said to Mr. Dickenson, "You do not call that the after-birth, do you?" Mr. Dickenson replied, "Yes, it is." Mr. Best rejoined, "Now I will show you the after-birth." He almost immediately brought into view a sanguineous mass, observing, "There is the after-birth." At the same moment the patient, who had evidently been for some time previously in a sinking state, her forehead covered with cold perspiration, and her pulse indicating great debility, uttered a loud shriek, as if the operation she had undergone had occasioned considerable pain. In little more than an hour after this she expired.

The exact nature of the case does not appear, and no post-mortem was allowed; but it is preposterous that a medical man should ever have been placed at a bar of justice under such circumstances. The friends of the patient should have blamed themselves for entrusting the woman's life, to an ignorant midwife, when they were evidently in a station of life to pay for proper medical attendance. The woman would possibly have been now alive had Mr. Dickenson been called in, in the first instance. The evidence respecting Mr. Best's behaviour was most extraordinary; if blame attaches to either, it would be to him. There appears some doubt whether coagula or the placenta had not been improperly removed; but we entirely concur with the remarks of Mr. Baron Platt, in which he passed a deserved eulogy on the profession, and insisted on a certain amount of discretion as to the impropriety or propriety of any doubtful practice to be exercised by the qualified medical man. Otherwise, he observed:—

"We should none of us gentlemen, if that were not the case, have the benefit, in a variety of emergencies, of the services of that profession to which we are often so greatly indebted; and the promulgation of the doctrine that medical men are criminally responsible for following the dictates of their matured judgment, might have the effect of preventing surgeons and others from acting with that confidence and boldness under peculiar circumstances, to which the preservation of life and limb is often due. There are numerous cases in which the judgment of medical men must be relied on; and if the works of the most able authorities of those whom I may justly term the sages of the profession, are not to be relied upon, I know not what guidance would be left for the direction of medical practitioners at large. It would, indeed be a monstrous thing to say that the conduct of the gentleman now under deliberation evinced either gross ignorance or gross negligence. I can, in fact, hardly leave it to your consideration. It is, indeed, possible, that the manipulation of the witness now in the box (Mr. Best) may have caused the death of the poor woman. We should, therefore, take the greatest care that we are in the right before we convict a gentleman in Mr. Dickenson's position of such an offence as manslaughter, and brand him with an imputation which may not only injure, but ruin, his character and his prospects."—*Lancet*.

#### POLICY OF LIFE INSURANCE VITIATED BY CONCEALMENT OF HERNIA—DIAGNOSIS OF HERNIA.—MEDICAL EVIDENCE.—MEDICAL ETHICS.

*Ashby and Others, Executrix, &c. v. Bates.*

This was an action, at Midland Circuit, Northampton, against the Argus Insurance Company upon a policy for the sum of £500 upon the life of Richard Ashby, farmer at Rugbrook, lately deceased. The first plea alleged that it was untrue that he had not rupture or any disease tending to the shortening of life, concluding with a verification; second plea, fraud.

Mr. Whitehurst proceeded to open the case for the defence. The insurance was effected in April 1844, the deceased being then 63 years of age. Before this could be effected, it was required as

usual that three papers should be signed—one by himself, one by his usual medical attendant, and one by a friend, not being a relation or interested in the policy, and that he should be subject of himself to an examination by a medical gentleman named by the office. Each of these papers contained questions put by the office as to the general state of health of the party, and as to his being, or having at any time been, the subject of any one of several enumerated maladies, among which was mentioned rupture, or any other disease or affection tending to shorten life. All these answers distinctly denied the existence of rupture then, or at any time previously, or of any other disease or affection tending to shorten life, and was satisfactory to the office, who then named Dr. Robertson, Physician at Northampton, as the gentleman to examine him, who accordingly did so in the manner described in his evidence, and wrote to the office, describing the party as being, to all appearance, hale, hearty, and robust, with a slight tendency to apoplexy, broad shoulders, and rather a short neck, but nothing particular, and stating that he thought that it was a life they might take. The policy was then granted, at a premium of £34. The paper signed by the deceased, and dated the 3d of April, 1843 contained these words: "I declare that all that is stated or contained herein is true; and I agree that this declaration shall be the basis of the contract." In May, 1845, the Company were informed that he was dead, and, upon making inquiry, it appeared that he had died of strangulated hernia; and it further resulted that the Company deemed it their duty to resist the payment, and defend this action.

Dr. A. Robertson called.—Has been between twenty and thirty years a physician in this town, and is physician to the infirmary here. At the request of the office, examined the deceased in the month of April, 1843, in the same mode in which he was always used to examine. He described this mode. He began with the head and proceeded downwards to the heart, lungs, and other viscera, and so on until he came to the lower part of the belly. He then asked them if they had any rupture or any thing unusual in those parts, cautioning them most carefully to conceal nothing from him, and warning them that if they did, it would vitiate the policy. If they answered explicitly "No," why then he proceeded no further. The deceased answered no, "No, nothing of the sort." If he had told him about his having been to another medical man to consult him about a swelling, of course he should have examined the nature of it. There might be particular circumstances of complication and difficulty in hernia, but, as a general rule, he should say that it was very easily distinguished from any thing else.

Cross-examined.—Should say that no careful and well-informed medical man could mistake hernia. Varicocele was a swelling of the veins of the spermatic cord. It did not dilate upon coughing. The test of hernia was by taking hold of the swelling, and making the patient cough, which caused it to protrude. It had a tendency to protrude. When large, it swelled upon coughing. Did not agree with Sir A. Cooper, in his treatise on Inguinal Hernia, that "varicocele was more frequently than any other disease mistaken for omental hernia." Hernia, when irreducible, is not always immediately dangerous, but might become so at any hour of any day. Any exertion might produce strangulation. Always told a man with irreducible hernia that his life was in perpetual jeopardy. Swelling of the testis could not be mistaken for it. Where a person died after an operation for hernia, its being of long standing would usually be indicated by the adhesion. Knew that he was blind and paralytic before his death. Thought that it was possible, but not likely, that a person might have hernia come on from taking three strong emetics one after the other. Knew that Mr. Lawrence had written that the action of the respiratory organs, as in vomiting or straining downwards, might produce it. Had never met with it from evacuation, upwards or downwards. Hooping-cough might cause it in infants. Did not know about its being common in cavalry régiments, or that riding on horseback was likely to produce it. It was more frequent with sailors who never rode at all. Mr. Mash, the house-surgeon of the infirmary, performed the operation. Any degree of adhesion between the hernia and the sac would indicate that it was of long standing, but there being no adhesion did not shew that it was not of long standing.

Dr. Charles Kerr.—has been a physician at Northampton twenty-three years, and thirty in the profession. Mr. R. Ashby came to him on the 13th of November, 1843, to consult him about a swelling in the lower part of the abdomen. Examined the part with considerable care. The scrotum was very large. Found

there was a hernia, and made endeavour to reduce it unsuccessfully, till he thought it imprudent not to desist. Examined him as to his general health and found it very good. He was full and robust. He told witness that it had been coming for a considerable time. Told him to come again in a fortnight. Made a second examination on the 9th Dec. 1843. Endeavoured to reduce it (the hernia), and took considerable pains, but it was quite ineffectual. It was what is commonly called an irreducible hernia. Had no doubt that he mentioned to him that it was rupture or hernia. Saw him in December 1844 for quite a different disease—neuralgia. Had no doubt whatever that what he had spoken of was hernia. It was possible that it would be mistaken, as eminent men had mistaken it. Had as perfect a conviction as he ever had in surgical practice that it was a plain case of inguinal hernia. There might be complicated appearances in certain cases. This did not appear to be one of that kind. The swelling was very large, about the size of his two fists, and of a different character; to a sac having fluid in it (hydrocele). If a hydrocele were large it would lose the pear shape, otherwise it would be like the shape of a pear with the thick end uppermost; but hernia would never resemble a pear with the thick end downwards.

Cross-examined.—If the hernia contained omentum, which he thought it did, it might get thinner, if he got thinner, by absorption; otherwise, if irreducible, as he had stated, it must have remained undiminished in size until he died. Did not think it likely that the hernia could have escaped the observation of a medical man who was putting him into a bath. Could not say that before his death he had mentioned it to Mr. Helston, who was attending him.

Mr. Coulson then gave similar evidence as to the nature and character of hernia, as distinct from hydrocele, varicocele, swollen testis, and affection of the spermatic cord.

This being the case, for the defendants.

Mr. Humfrey proceeded to address the jury on behalf of the Plaintiffs, suggesting that physicians were not so well acquainted as surgeons with the diagnostics of a disease so peculiarly surgical, and contending that the malady was an enlarged testis, which the deceased had from his birth, and that the rupture of which he died came on a very few days only before his death, from the effects of three very strong emetics which he had taken one after the other, administered by a Mr. Smith to relieve his total blindness, or from straining at that time in the one way or the other. The learned counsel also urged the resemblance in appearance of both hydrocele and varicocele to inguinal hernia, as accounting for Dr. Kerr having been mistaken; and then called the following witnesses:—

Mr. W. Norton, farmer, knew the late Mr. R. Ashby for twenty-four years before his death; certified for him when he effected the insurance. Knew that he had a swollen testis. Never knew of his having a rupture.

Mr. Helston is a surgeon, and has been in practice fourteen years. Had attended deceased for many years until within five years ago, when he ceased to attend him for two years. In 1844, gave the certificate for the insurance office. Examined him with reference to the questions put by the insurance company. Discovered an enlargement of the left testis, and a thickening of the spermatic cord. Then examined him in the usual way for hernia, by pressure with the hand and by making him cough violently. Discovered no swelling or enlargement of the ring, which is partly muscular and partly tendinous. Continued the examination until he was perfectly satisfied that he was not then, nor ever had been, the subject of hernia. Witness was concerned for seven or eight medical clubs. Always examined the proposed members of such clubs for hernia. It was an important part of his duty. Irreducible hernia could not have existed, as had been described, in November 1843, and been so reduced as when witness examined him. He generally went about on a donkey with a saddle. He always was about his business daily. Attended him in November 1844. From his complaints then, considered at first that it was an apoplectic tendency. He complained of head symptoms, for which he was cupped and leeches, and witness ordered him the warm bath; the usual antiphlogistic treatment. He suffered from piles at this time. Dr. Kerr attended consultations with witness and his partner during the last fortnight before his death. No mention was ever made of hernia by either. He had varicocele, which occasioned the thickening of the spermatic cord. He complained of pain arising from the testis and the spermatic cord

about a fortnight before his death. Then examined him, and there was no appearance of hernia. He was incapable of doing anything, and the women of his family attended him, lifted him in and out of bed, and washed and fed him with bread and milk like a child. This was rendered necessary, partly by paralysis and partly by blindness. He consulted Mr. Smith of Southam, who prescribed three strong emetics, and also some strychnine, all of which he took. The emetics contained a full dose of tartarized antimony. Straining would be calculated to produce hernia. Had witness supposed that he had hernia, he would not have suffered him to take what was so prescribed.

Cross-examined.—He died from the consequence of the operation for hernia. Had not seen him for nearly a fortnight before his death in Jan. 1845; did not reduce a rupture which he had (then?) or at any other time. (A letter was then put into his hand, which he said was in his hand-writing.) He again stated that he had never said that the deceased had had hernia. (The letter was then put in and read. It was addressed to Dr. Robertson, the first witness, and stated that the deceased had had a slight hernia about four months before he died, which he had reduced.) He had complained of varicocele, which he had reduced by manipulation. What he wrote in the letter was the falsehood, not what he said to-day. He called varicocele an enlargement of the veins of the spermatic cord. In April 1844, saw the suspensory bandage. He had been affected with that ailment from his birth. He had a tendency to apoplexy. He yet thought it right to order warm baths after he had cupped and leeches him, and applied cold lotions to his head. He occasionally suffered from slight rheumatism, for which, before 1841, he invariably attended him. Came into the room perhaps half an hour after the operation. Was not present, because he was unwell, and had been confined to his bed for several days. The operation was performed in the night, earlier than four o'clock.

Re-examined by Mr. Humfrey.—The disease under which the deceased had laboured had existed from his birth, and he did not think it at all important when he signed the certificate. The letter read was in answer to a letter from Dr. Robertson, which was marked "strictly private," and contained a promise that he might rely that his name would not be given up in any way.

Mr. William H. Walker, partner of the last witness, attended the deceased professionally for about a fortnight before his death. Met Dr. Kerr there many times in consultation about Mr. Ashby's case. Several times assisted in putting him in the bath. Saw no such swelling as had been described. Thought he must have seen it, if there had been such. Was fetched about 4 o'clock the day before his death. He complained of having been sick, and of a sudden violent pain and enlargement of the scrotum, as if something had fallen down. Upon that he examined the part. Asked him if he had ever had an attack of that kind before. He said "Not to my knowledge," but added, that a fortnight previously he had been taken with a violent pain in his bowels, and that Mr. Helston had been sent for, and did something to him; and he soon after became better. He said this particular appearance had happened about an hour previously. He continued very ill, and Mr. Mash was sent for from the infirmary, and attempted with his assistance to reduce the rupture. It was both omentum and intestines. Saw the operation performed by opening the ring with a knife. The cause of strangulation and pain was removed after the operation. He bore the operation very well indeed. Mr. Mash succeeded in returning the whole, but it came down again, though the cause of strangulation was removed. There was no adhesion, and it appeared to witness to be a case of recent date.

Cross-examined.—The deceased told him that the fortnight before Mr. Helston had done something which relieved him, but did not mention the word "operate" or "rupture." It was the witness's own conclusion at the time that it might have been for rupture. [This witness here produced a letter which he had received from Dr. Robertson, and which was similar to the one addressed to Mr. Helston, which had happened not to have been brought, and sought information as to the cause of the death. It was marked "private," and gave assurance that the witness might rely that his name would not be given up, or himself brought into any trouble or difficulty. The answer was then called for, produced, and read; and, unlike the answer of the other witness, tallied very accurately with the evidence given by Mr. Helston to-day, as well as with that of the present witness.]

Mr. James Mash.—Is resident housesurgeon here, and has been so for twenty years. Performed the operation. Found strangulated hernia. Would not have given strong emetics. Mentioned in the presence of Mr. Harrison, the clergyman, that it was a very bad case, and that he wished to have some other surgeon sent for. There was old age, an enfeebled constitution, deafness, and partial paralysis. There were slight adhesions at the upper part of the sac. If it had been a case of long standing there would, he thought, have been some changes, which there were not. It might have been the result of a few hours, of a week, of a month, or more. There was considerable inflammation, which would produce adhesion. From what he saw, when he performed the operation, and afterwards, there was nothing to induce him to believe that it was as much as fourteen months old. Had several times known persons sent to the hospital by respectable surgeons for hernia where there was no hernia at all. Had seen many cases which puzzled him to know hernia from other diseases affecting that part. Upon returning, the omentum and intestine, observed that there was an enlargement of the left testis. Had on one occasion himself returned all the omentum and intestine, and afterwards discovered a hydrocele as big as his fist. Enlargement of the testis sometimes accompanies hydrocele.

Cross-examined.—It perhaps might be his first and natural conclusion, if he saw a hernia as large as his two fists come down suddenly, that there had been a former hernia reduced, which had come down again. Supposing that the man had this affection of the testis from his infancy down to 63, he should not have thought it of consequence. If it (the hernia) had come down a fortnight before and been reduced, it might account for the size. With the stricture which he found, there could not have been a hernia as large as two fists reduced by being drawn up, or without recourse to the knife.

Mr. William Williams, surgeon.—Cases of hernia may be and have been confounded with hydrocele and varicocele.

Mr. Frederick Cox.—Has been a surgeon for nine years, at Wexford. Never heard of an irreducible hernia of the size of two fists being spontaneously cured, or reduced without the knife, except under circumstances of great emaciation.

Mr. Robert Marriott Freeman.—Hydrocele of the sheath might be mistaken for hernia. Was present at the Birmingham Hospital, very recently, when an operation was performed by an eminent surgeon for what was supposed to be hernia in the passage to the scrotum, which turned out to be a watery swelling or hydrocele, with a swollen testis and thickening of the spermatic cord. He had now a case where he had intended to operate six weeks ago for hydrocele, and the patient afterwards came and declined to have the operation performed, as it was all rapidly going away.

Mr. Charles Dodd and Mr. Marshall concurred with other medical witnesses for the plaintiff, as to the disease of hydrocele having been sometimes mistaken for hernia by surgeons, and there being, not unfrequently, great difficulty in distinguishing.

All these last five gentlemen concurred almost entirely with the other medical witnesses for the plaintiff as to hydrocele and varicocele being sometimes mistaken for hernia; but they one and all denied ever having operated under such mistake, though they admitted that there was considerable difficulty in distinguishing.

This was the case for the plaintiff.

Mr. Humphreys, counsel for the plaintiff, addressed the jury upon the letters, animadverting upon the use that had been made amongst medical gentlemen of confidential letters, written on request, and under such a pledge as had been stated. He contended, however, that the letters, taken together, told strongly in favour of the claim of his clients. After Mr. Justice Coltman had summed up, the jury returned a verdict for the defendants upon the first issue, viz., that the deceased, at the time of effecting the insurance had hernia; and for the plaintiffs upon the issue of fraud. The verdict is, therefore, for the defendants; and in favor of the Office.\*

REMARKS.—We should have felt heartily rejoiced if any doubtful circumstances, or mitigatory facts, had existed which would have enabled us to place a favourable construction upon the conduct of a leading witness in the above case. It is with regret, however, we find that there is no ground of exculpation for conduct which must, to a certain extent, affect the character of the whole profession.

\*Abridged from Times Report.

It would be a long and unprofitable task to endeavour to prove the correctness or incorrectness of the opinion that Mr. Ashby was either not the subject of hernia at the time this witness attested the soundness of his health in April 1844, or was then suffering from a diseased condition of the testicle and spermatic cord, which rendered the existence of a reducible hernia unknown to himself, and by no means easily recognisable by his medical attendants. But it appears very clear that sufficient evidence was adduced in favour of the plaintiff's side of the argument to have rendered it highly probable that a verdict must and ought to have been given in their favour, had not the most important feature in the evidence been marred by the conduct of the witness who gave the medical certificate required by the Insurance Office. This was to the effect, that in April 1844, he examined Mr. Ashby for hernia, and was perfectly satisfied that he was not then, nor ever had been, the subject of that disease. A certificate of this kind must, we apprehend, if coming from a credible source, have gone very far to prove the plaintiff's right to a verdict, for, as the report stands, it does not appear that a single positive fact was adduced in evidence to show that the deceased suffered from hernia previous to the time at which he made his declaration—namely, April 3, 1843\*. But when the witness declared upon oath, at the moment he had in his hand a letter which he admitted was written by himself, that he had never said the deceased had had hernia, when the letter is found to contain an admission that the deceased had had slight hernia about four months before he died, which he (the witness) had reduced; and when he further admitted that what he wrote in that letter was a *falsehood*, and implied that he had not, in reality reduced a hernia, but had performed the incomprehensible operation of reducing a varicocele by manipulation, it was not likely that the jury would place any confidence in his testimony.

The whole case, indeed, affords an important lesson to all parties, whether insurers or insured. Good faith and upright dealing are required on both sides, or the agreement is invalid. The facts proved at this trial, afford a curious illustration of the state of medical ethics in this country. A physician employed by an Insurance Office procures a letter from a surgeon who had certified to the state of health of the deceased, under a promise "that he might rely that his name would not be given up in any way." The letter was marked "strictly private." At the trial the surgeon makes a statement directly contrary to that which is contained in the confidential letter. The "strictly private" communication is then handed by the Insurance physician to his employers; and the name of the writer is not only given up, but the Insurance Company gain a verdict, not by proving their case, but by showing that the testimony of the principal witness on the part of the plaintiff was unworthy of credit. Here, then, is a double warning. A medical man should not certify one thing and swear to another; and "strictly private" letters forwarded to the medical officers of Insurance Companies will be dealt with according to law—i. e., exposed in court, if they can be made in any way useful towards obtaining a verdict. For our part, we think that in a case like this, an Insurance Company has no right to rely exclusively upon what another and, to them, a strange practitioner perhaps carelessly certifies. It was competent to their own medical officer, with any knowledge of his profession, to determine whether hernia existed or not. The paid officer of the Company, however, is contented with barely asking a question; the probably unpaid medical referee makes a careless examination or makes a careless return, when the party who suffers in the event of an erroneous report is the insured, who may probably have been ignorant of his real condition. A policy should undoubtedly be vitiated by any material concealment on the part of the insured; but when it is in their power to appoint experienced surgeons and physicians, and pay for their services, Insurance Companies have no right to rest a case of disputed policy upon the concealment of a disease, the existence of which is so easily determined, or upon the bad faith or carelessness of some unpaid medical referee.—*London Medical Gazette.*

\*We have, of course, been compelled to reason upon the facts as stated in the original report; but we apprehend that an error has occurred there with reference to the date at which Mr. Ashby signed the declaration, and was examined by Dr. Robertson; these transactions probably took place in April 1844, not in 1843, as stated in the newspaper report; it is hardly conceivable that an Insurance Company would grant a policy in a case where the declaration of health had been made a twelvemonth previously.

## PHYSIOLOGY.

## ON THE INTIMATE STRUCTURE OF BONE.

At the Microscopical Society, on the 18th March last, a paper was read by the Secretary, John Quekett, Esq., "on the intimate structure of bone in the four great classes of animals," viz. in animals, birds, reptiles and fishes, with some remarks on the great value of the knowledge of such structure in classifying minute fragments of fossil organic remains." After alluding to the highly important results obtained by Mr. Owen, by the aid of the microscope, in determining the affinities of extinct animals by means of their teeth, the author went on to state, that having for some time paid considerable attention to the structure of bone in the four great classes of animals, he had found certain characters peculiar to each great class, by which a bone of one class could be distinguished from that of another. He briefly described certain characters which were present in all bones, and then those which were peculiar to each class; viz., the Haversian canals, and the bone-cells with their little tubes (canaliculi, proceeding from them; and he applied the characters derived from the bone-cells to the determination of the class of animals to which any minute fragment may have belonged; for he had ascertained that the bone-cells were smallest in birds, a little larger in mammalia, and largest of all in the reptilæ. The bone-cells of fishes were remarkable for their being so unlike either of the three preceding classes, that having been once seen they could not easily be mistaken. The author then noticed the relative proportions of the bone-cells and blood-corpuscles of the same animal, and concluded by remarking that, however different the size of animals of the same class may be, the bone-cells did not vary according to the difference in size; thus, the mighty iguanodon, some scores of feet in length, had no larger bone-cells than the smallest lizard which we trampled under our feet, nor the horse or the ox than the smallest of our quadrupeds, the mouse.

## SURGERY.

## CASE OF A GUNSHOT WOUND, IN WHICH THE SHOT PASSED THROUGH THE BALL OF THE EYE, WITHOUT DESTRUCTION OF THE ORGANS.

By A. L. Cox, M.D.

On the 16th of July, 1845, I visited Jacob Raider, a German, æt. 24, who had received a charge of small shot from a gun, in the hands of a companion, in a hunting excursion. He was stooping down in some bushes, and unfortunately, rose up at the very moment in which his friend discharged his piece at some quails, which were flying over his head. Several of the shot struck him on the right side of the neck, and were imbedded under the skin; one could be felt just in front of the ear, and another entered the eye of the same side.

The point of entrance was in the sclerótica, half way between the internal canthus and the edge of the cornea. Judging from the direction and penetration of the rest of the shot, it is probable that this passed through the eye, and became lodged in the muscles or fat immediately behind.

No injury was done to the brain, as was confidently inferred from the absence of all symptoms of cerebral disturbance. The orifice was small, surrounded by a black margin, the stain of the powder, and by a slight inflammation of the conjunctiva only. It was accompanied by loss of vision.

The accident occurred in New Jersey, and the patient consulted a physician in the neighbourhood, to whom he was recommended, who advised him, with some appropriate treatment for the occasion, to hasten home, expressing his confident conviction that nothing could prevent the destruction of his eye from supervening inflammation.

On my way to the house of the patient, I met a friend who has enjoyed a good share of surgical experience and

practice, and invited him to visit the case with me. He expressed the opinion, also, that the loss of the eye was inevitable, and had no doubt of the fact, that the shot had passed through that organ, and lodged behind it in the fatty matter, or in the substance of the muscles.

I introduced, with great care, a small gold probe, without any apparent irritation, but was not able to feel the posterior orifice, and unwilling to add to the excitement of the wound, I avoided any protracted employment of the probe.

The indication most important in the case, seemed to me, to prevent excessive inflammation, and my whole practice was accordingly directed to the energetic employment of the antiphlogistic regimen.

I prescribed for him, a dose of calomel, one scruple, to be followed in twelve hours with an ounce and a half of epsom salts. I took twenty ounces of blood from his arm; ordered cold applications constantly to the eye and head, and enjoined a rigorously low diet.

The next day, twenty leeches were applied to the temple; same diet, and an eighth part of a grain of antimonium tartarizatum, every two hours. In addition to this, and with a view to anticipate ultimate evil consequences from so serious and unusual an injury, I recommended and practised the introduction of a seton into the nape of the neck. But little fever happened, accompanied with some pain in the eye and head, of which, indeed, he complained from the first.

On my second visit, I found by admitting a little light into the room, that the injured eye was of a pea-green colour; probably, owing to extravasation in the iris. The contrast was very remarkable with the other eye, which was of a bright and beautiful blue.

By applying a poultice to the seton, a considerable discharge was established on the third day, which increased afterwards so that it became very free, and I am persuaded, contributed essentially to the happy result of the case. I thought it prudent to resort again to the use of leeches, twice after the second day, viz., on the fourth and fifth days.

By these means, no more inflammation happened than was desirable, and indeed, necessary to the restoration of the wounded tunics of the eye; his sight gradually returned, and at the end of a fortnight I had the satisfaction of pronouncing him well.

About the end of August, just six weeks after the accident, I had a visit from Raider, who could then see as well as ever, with the exception of objects on the right side. He was sensible that in that direction an indistinctness of vision existed, which was, however, so slight, that he said he would not have known it, if he did not compare it with the other eye.—*New York Medical and Surgical Reporter.*

## OBSERVATIONS ON LIGATURES.

*(Concluded from last Number.)*

I do not hesitate to declare, that the old operations, were frequently attended with bleeding; but this we shall prove in due time.

The various circumstances under which the tied artery bleeds, whether at the moment of tightening the ligature—in the sequel of sloughing—as a consequence of too rapid ulceration—or protracted or deficient reparative action—or through premature exertion of the patient,—all these anxious cases are the province of cultivated experience; but it will be my endeavour to confine myself to the exposition of somewhat aggregate facts.

The facts I am about to refer to, will, I hope, lead to a double inquiry—namely, in the first place, are the fatal bleedings after ligatures more numerous than they are reported to be? and 2ndly, is the tying of great vessels capable of improvement?



It seems needful here to speak of at least two kinds of bleeding after ligatures. We have one with pretty copious repair, thickening and contracting vessels, yet a point gives way. We have another list of cases with no repair, or with sloughing, atrophy, ulceration, or abscess, and with gaping tubes. Thus we find only a slight local defect, or a wide constitutional deterioration.

The history of hæmorrhages from ligature resembles the failures of despoils. Even museums shew but a part of this unfavourable side of the surgery of arteries, which is to be set against the too partial records of medico-chirurgical societies. The taste for preserving the painful evidences is nowhere, I think, excessive.

Some chief points in the history of ligatures seem to be entirely neglected. Surgeons have not often stated how much they entertained the particular design of thoroughly dividing the internal arterial coats, nor what reason they have had to conclude their design accomplished. They have not stated the circumference of the noose, as shewn after its separation. Some precision here, and as to the apparent size and solidity of the vessel, seem indispensable. Few appear fairly to have matured their hands and judgments by experiments on the body recently dead. I do not know that any one has fairly shewn that the thread may trench deeply on a third, or two-thirds, of the inner circumference, and leave the remainder entire, and the thread perhaps almost loose. The last-named occurrence may explain the case of early bleeding and late separation of the ligature.

I have noted numerous instances wherein I could only suppose that moderation had secretly stood before theory.

One surgeon of distinction tells me he is more gentle than others, and another states that he has never felt the peculiar giving way of tunics in any of his operations.

The separation of a ligature many days after the outbreak of hæmorrhage is not very uncommon. The advocates of tight ligatures may complain that the thread has here done too little, supposing that it should have done wider instead of partial mischief; but is it not desirable that the tardiest process should have involved the whole cylinder, instead of a part.

TABLE.

Bleeding safe.	Bleeding fatal.	Day.	Ligatures separated safely.	Ligatures separated, died later.
1	1	4		
	1	7		
	1	8		
	1	10	1	
	1	11	2	
	1	12	5	
	1	13	3	1
	1	14	1	
		15	2	
1		16	2	
		17	3	1
1	1	18	2	
		19	1	
		20		1
		21	1	
		22	2	
	1	25		
		27	1	
	1	29		
		31	2	
		43	1	
		47	1	
		85	1	
3	11		31	3

A brief consideration of this table will supply a clear idea of Dr. Norris's results concerning hæmorrhages and the se-

paration of the ligatures. In the first column are placed 3 instances of bleeding, which did not prove fatal. These may be assumed chiefly to have resembled the most commonly known occurrences of the same kind, viz., moderate arterial hæmorrhage, arrested by simple treatment and good constitutional powers. The last two cases in this first column may be called decidedly late bleedings, and such are by far the most hopeful.

A recent and most complete digest\* of 60 cases of ligature of the subclavian artery, by Dr. G. Norris, will supply us with some very remarkable and striking inferences.

"The 69 operations were performed for disease or injury. 56 were done for the cure of aneurism; 9, in consequence of wounds or secondary hæmorrhages; 1 was made necessary in consequence of rupture of the axillary in an attempt to reduce an old luxation; and 3 were done for diseases supposed to be aneurismal.

"Of the 69 cases, 33, or nearly one half, died; of these, 2 died from sloughing of the tumor; 9 from hæmorrhage, coming on at various periods between the 4th and 33d† days; 5 from inflammation within the chest; 6 from mortification of the extremity; 1 from effusion on the brain; 1 from exhaustion; 1 from inflammation; 3 from suppuration of the tumor; and in 5 cases the causes of death is not given."

The fatal bleedings are shown in the second column of the same table. These are 11 in number: but I have to state that a rigid examination of the cases concerned give at least two or three additional examples, wherein death, however, followed from still more serious causes. The first bleeding was fatal on the 4th day, the 2d on the 7th, and so on. It need not be shown that, for the most part, the hæmorrhagic cases hold out at least a day or two. A case of bleeding fatal on the 18th day was one of repeated bleedings from the 7th day; that fatal on the 25th day lasted four or five days.

It must be admitted that the instance fatal on the 11th day was seriously complicated with visceral inflammation, although bleeding had gone on from the 8th day; and the last two cases in the column fatal on the 25th and 29th days, may be said to have had a narrow escape of complete recovery—at least, so far as the ligature was concerned, although both evinced considerable fixed disorder of constitution. The last fatal bleeding began on the 23rd day as a sequel of erysipelas.

The preceding would appear to lead to the conclusion, that the serious hæmorrhages began almost entirely before the 12th day. It may be supposed that the non-fatal bleedings set down in the first column, for the 4th day, and which was also repeated on the 5th, almost belongs to the cases in our second or fatal column,† and it may be fairly inferred that the fatal hæmorrhages are not fewer than the table demonstrates.

The third column gives the days on which the grand events occurred. The fourth relates to the manifest separation of the ligatures.

On the 10th day only one ligature came away; on the 11th, two: but, observing the dates of the fatal hæmorrhages in column two, these almost solitary and in a manner premature events would seem to have been very nearly cases of hæmorrhages; 5 ligatures came off safely on the 12th day, 3 on the 13th, and so on. The 5th column presents only the minor facts of the safe separation of a ligature on the 13th, 16th, and 20th days, the patients sinking at a later period from remote causes.‡

\* American Journal of Medical Sciences, July, 1845.

† The Table, which I have taken some pains to test, does not verify this number:—I make it the 23th.

‡ The complete separation of the ligature was probably subsequent.

§ I am indebted to the precision and zeal of an able friend, Mr. H. Halés for the discovery of an error in Dr. Norris's table, which is rather more adverse with reference to my arguments, than to Dr. Norris's great carefulness.

By another method of calculation Dr. Norris's admirable Table will fairly justify the statements which follow. The mean time of death by bleeding is 14½ days after applying the ligature; this brings the *incipient* hæmorrhage to about the 10th day. The mean day of three hæmorrhages not fatal was the 13th. The mean time for the separation of the ligature in the successful cases was the 16th day.

It may be extremely easy to give a different expression to every one of the particulars, which, for the sake of simplicity, I shall reduce to 5 simple numbers. At all events, we must infer that a certain critical day is to be pointed out preceded by dangers, and followed by comparative security, quoad the operation. In short, there is a time before which the only separation of ligatures is hæmorrhagic, and pretty certainly fatal. There is a later period when bleedings are few and much more hopeful; and again, one when the process of detaching the ligature is harmless. We may admit that more facts and more experience ought to correct these generalizations, but we hope that many will grant both truth and force to the deductions—

That the 12th is about the critical day.

That about 11 fatal hæmorrhages precede this period.

That about 3 safe hæmorrhages follow the same period.

That after the 12th day all the separations of ligatures are safe.

The residual fact of deaths from various constitutional causes will be found very closely represented by the number 22, including probably an hæmorrhage or two.

As far as we have at present gone, there appears to be a time beyond which hæmorrhage is but little to be expected; and although sometimes no repair can be attempted, later bleedings are, in the main, more hopeful. We have found nothing whatever to indicate one evil from too loose a ligature, or from one retained beyond the ordinary periods of separation. We must conclude that the tightness of the ligature regulates in good part the rapidity of the separation; and that a somewhat tardy process of securing the vessel is vastly in favour of the natural powers, and of judicious endeavours to reinforce the constitution. We ought, of course, to look for a certain proportion of late and serious bleedings when the ligature has acted with its utmost of safety; but their characters will be found specific enough. It will be a prime object of consideration to inquire how it happens that, in the course of tolerable repair after ligature, hæmorrhage once established may become fairly stayed. The distension is within the tube, the resistance fails at the orifice. The first declines, and the latter prevails. That essential power of contraction which tumid organizations and new growths possess, seems to be the final curative means at the precarious crisis. A proper attention to this effort may obviate new dangers and fresh operations. We should ever fear lest loss of blood, or even a purgative, may lead to absorption or ulceration. It is had enough only to retard the reparative closure of the wound. A fortnight's abstinence may bring one near to atrophy, if not to ulceration.

After a fuller review of facts, we may better inquire how far the events are affected by the state of the blood—its quality, quantity, and tension.

It appears that one safe ligature came off on the 10th day, (Dr. N. says the 12th). The patient was a healthy temperate man, æt. 35, with a very large aëriem. The "serre-nœud" was used to enforce the tightening of the ligature! (Todd, Dublin H. R. iii. 472.)

Again, the *Leçons Orales* 1839, to which Dr. N. has not had access, enable me to correct the statements relative to Dupuytren's two cases. I have transferred the successful separation of a ligature from the 15th to the 11th day on my tables; and finding that the fatal case bled from the 4th day, I increase my second column by one. The man was aged 38. Nerves were included in the ligature, and the middle scalenus was "un peu intéressé." Tying the first knot caused fearful pain, but it would seem to have been too much to undo it. There is a doubt whether the impulse in the sac was extinct. The 8th was the fatal day. The date seems 1819 for both cases, and in each the anterior scalenus was divided.

I next propose to offer some particulars concerning the ligature of other great vessels, and the main results, which will not be found less corroborative of my present position, although I shall endeavour in good part to present them as illustrations of ulterior points.—*London Medical Gazette.*

#### ON THE INJECTION OF AIR INTO THE EUSTACHIAN TUBE, IN CASES OF DEAFNESS.

The injection of air into the Eustachian Tube, though practised many years ago, had almost fallen into disuse, until revived by Kraner, of Berlin, and latterly, we believe, by Yearsly, of London. In a recent work on Deafness, we find the following passage, which we have much pleasure in laying before our readers; it will give them a good idea of the opinion of the best French Aurists on this matter:—

"Dans tous les cas, M. Deleau n'a pas eu confiance aux injections, car il préfère traiter l'oreille interne au moyen des douces d'air, pour qu'il donne à une colonne de ce fluide qu'il introduit au moyen d'une espèce de soufflet qu'il a fait confectionner à cet usage. On lève aussi les mêmes doutes sur les succès par ce dernier procédé. Voici, au reste, comment s'exprime le docteur Hubert Valeroux:—'C'est dans le but d'éviter des inconvénients des injections liquides, et de faire parvenir directement à l'oreille moyenne des agents thérapeutiques appropriés à son mode de vitalité, que le docteur Deleau proposa, il y a une vingtaine d'années, d'associer les injections gageuses au cathétérisme, dans le traitement des surdités par cause internes. A l'appui de son inadvertance, le docteur Deleau cita, comme on sait, plusieurs succès, et entre autres, la guérison de quelques sourds-muets; s'élevant ensuite avec force contre les méthodes de traitement suivies jusqu'alors, il signala les inconvénients des alcalis métalliques, et s'étendait sur les dangers qui résultent des injections liquides dans les cavités de l'oreille moyenne. Tout le monde se souvient des discussions que ces travaux soulevèrent dans l'académie. Itard surtout dont la méthode avait été si fortement attaquée, y prit une large part; et jamais, dit l'auteur de son *Gloge historique*, [le docteur Bosquet] deux auteurs ne furent plus opposés et plus fermes dans leurs doctrines. Il ne peut entrer dans notre dessein de recommencer une discussion depuis longtemps éteinte; le docteur Deleau a rendu à la Thérapeutique Auriculaire un service qu'il serait injuste de méconnaître; mais aussi, il faut le dire, l'esprit d'enthousiasme a singulièrement exagéré les avantages de la douche d'air.'

"Pour apprécier à sa juste valeur le procédé de M. Deleau, nous devons faire observer d'abord, que l'air atmosphérique ne peut dans aucun cas être considéré comme un médicament, et que les guérisons nombreuses et incurables consignées dans les travaux de cet auteur, doivent être rapportées à toute autre cause qu'à celle qu'il lui assigne. Itard avait levé la même doute, ce que lui faisait dire: 'Dieu seul pourrait d'un souffle, rendre l'oute à l'homme.'—*Journal des Connaissances Médico-Chirurgicales*. 1843.

[We propose laying before our readers, in the subsequent numbers of this Journal, the Clinical Lectures of Sir Benjamin Brodie, now in course of publication in the "*London Medical Gazette*," which, we have little doubt, will be as highly valued for their eminently practical character by our readers, as they are by British surgeons:—

#### LECTURE ON DISEASES OF THE KNEE-JOINT.

By Sir B. C. BRODIE, Bart.

##### *Morbid alteration of structure of the synovial membrane.*

There is a curious condition of the synovial membrane in which it seems to have undergone a peculiar morbid alteration of structure. It is thickened in various degrees, sometimes to the extent of an inch and a half, having assumed a sort of pulpy structure intersected by white membranous bands. In some instances there is a preternatural vascularity and vessels injected with blood are seen ramifying in it to a considerable extent. In other cases no increased vascularity



is perceptible. There is little doubt that in some cases this is the result of long-continued chronic inflammation; but in others I am led to believe that it takes place independently of inflammatory action; at least, I have seen several cases in which there were no symptoms indicating the presence of inflammation until the disease had reached its most advanced stage; and we well know that at this period of an organic disease inflammation is liable to occur, whatever the disease may be. I am not certain that I have seen this disease anywhere except in the knee-joint, but Mr. Hodgson of Birmingham, has met with it in the joints of one of the fingers.

Where the disease supervenes on repeated attacks of inflammation, there are of course in the first instance inflammatory symptoms such as I described in a former lecture. In other cases, in which it seemed that the disease had not been inflammatory in its origin, the symptoms have been as follows:—

The patient complained not of pain, but of a slight stiffness in the joint, so slight that at first it scarcely attracted his attention. The pain then became more considerable, and on looking at the knee he has perceived that it was somewhat swollen. The swelling and the stiffness have increased, still being unaccompanied by pain, and at last the swelling has attained a large size. On examining the knee at this period, I have found a soft elastic swelling, without any sense of fluctuation, and having somewhat of the same shape that it presents in cases of inflammation of the synovial membrane when the joint is distended with fluid: the principal difference being, that the swelling, instead of being uniform, was more prominent in one part, less so in another, in consequence of the difference in the progress of the disease in different situations. Occasionally the disease is limited to one portion of the membrane. A girl labouring under this disease died in this hospital from some other malady, and on examining the body I found the synovial membrane on the inner side of the knee altered in structure in the way which I have mentioned, while on the outer side it did not differ from its natural condition. The disease has sometimes gone on for two, three, four, or five years, before any further symptoms showed themselves. As it has advanced to the layer of the synovial membrane, which is reflected over the cartilage, the latter has begun to ulcerate, the ulceration being marked, as on other occasions, by aggravation of pain and startings of the limb at night. At this stage of the disease small abscesses form in the substance of the diseased synovial membrane. These gradually make their way to the surface, one coming forward in one place, and another in another, discharging a very small quantity of matter.

When the cartilages are thus ulcerated, and matter is formed in the joint, and perhaps in the substance of the synovial membrane also, the patient's health begins to be affected, as in other cases of articular abscesses, and at this period nothing can be done for him but to amputate the limb. Can any remedial means be employed with success in the early stage of the disease? I used to think *not*, and that is the opinion I have published in my work on Diseases of the Joints: It was my belief that it was a disease not under the control of art: I had indeed seen both local applications and constitutional treatment employed without any good result whatever. But I am not satisfied that this opinion was correct. The following case occurred about ten years ago, and I mention it because I had an opportunity of watching its progress for several successive years:—

A young man, about eighteen years of age, consulted me concerning a disease in the knee: It had then been advancing slowly for five years; there was no pain, and never had been, but the joint was considerably swollen, the swelling being elastic, more prominent in some parts than in others. There was no perceptible fluctuation, but the joint was very stiff, and the disease had all the characters of that which I have just described. I first of all applied pressure

by means of several alternate layers of diachylon plaster and bandage, and this was kept up for a considerable time; afterwards recourse was had to leather splints, secured by a firm bandage, so as to keep the joint fixed at the same time that moderate pressure was made upon it. Constitutional treatment was not neglected. The patient was put through a course of sarsaparilla and the bichloride of mercury. This plan of treatment, occasionally varying the medicine, and still keeping up pressure, was persevered in for three years, with a slow and gradual, but very manifest improvement: and when I last saw the patient the joint was scarcely larger than the one on the opposite side. It was stiff, but he walked very well with an ankylosed knee.

The disease which I have now described is of rare occurrence, and although it may sometimes originate in long-continued inflammation, it is to be distinguished from the pulpy thickening of the synovial membrane which I have formerly described, which is common enough. The appearances which the disease presents are displayed in the drawings and preparations on the table.

#### *Loose cartilages in the knee.*

Loose cartilaginous bodies are sometimes found in the joint. They are more commonly met with in connexion with the synovial than the serous membranes, but are not peculiar to the former. They sometimes are formed in the pleura and in the tunica vaginalis, and I have in one instance met with them in the cavity of the peritonæum. In its recent state the large cartilage is generally flattened, smooth on the surface, but of an irregular shape. In the first instance it is connected by a band of membrane which seems to be a continuation of the synovial membrane, to the inner surface of the joint, but at last this membrane becomes ruptured, and then the cartilage is altogether loose in the articular cavity. It has just the appearance externally of the proper cartilage of the joint. When it is of small size it is cartilage throughout, but when it attains a large size, we generally, I might, I believe, say always, find that the bone has been deposited in the centre. When dried it shrinks to so small a size that scarcely any part except the bony centre is perceptible; as you may see in the specimens which I now show you. These loose cartilages form in various numbers; sometimes there is only one, but I have in operating on a single patient extracted as many as five.

The first inconvenience which the patient experiences generally occurs in walking. The cartilage slips between the articular ends of the bones, producing a good deal of pain, interfering with the motion of the joint, and sometimes causing him to stumble. By a little management he contrives to expel it from the situation in which it is lodged, and then he walks home well enough; but he is liable to a recurrence of the accident. The distress which the disease occasions is different in different cases; the difference depending on the circumstance of the cartilage being or not being attached to the synovial membrane, on its size, and other circumstances. In one case it may slip more easily between the bones, and less easily in another. Not unfrequently the patient goes on for years suffering very little from the disease. In other cases, not only does the cartilage frequently slip between the bones, but whenever it does so a violent attack of inflammation of the synovial membrane takes place, so that the patient is laid up, perhaps, for weeks. After a time it would appear as if the constant slipping of the cartilage between the bones injured the articular cartilage and caused them to ulcerate. Here is a specimen where there were two loose cartilages in the joint; the cartilage covering one of the condyles of the femur is ulcerated to a considerable extent, but without suppuration. In this case the patient used to suffer more than the usual amount of pain in the joint, whenever the cartilage slipped in between the articulating surfaces.

These cartilages may be removed by an operation, which I have performed several times. In some instances no in-

inflammation followed the operation, in others a great deal. In one case which came under my observation, under the care of the late Mr. Jeffreys, suppuration followed, with a great deal of mischief, and the patient ultimately lost his limb. I suspect, however, when such ill consequences ensue, that very frequently it is the fault of the surgeon. The operation requires to be performed with the greatest caution. Get the cartilage fixed over the outer or inner condyle of the femur, and there let it be held, either by yourself or an assistant, to prevent it slipping into the joint. The skin, the cellular membrane, the fascia, the ligaments, and the synovial membrane, must be slowly divided one after the other; the knife being held with a light hand, as otherwise the cartilage will be pressed into the joint, and you will not be able to extract it. Having divided the parts carefully, and made room for the cartilage to escape through the synovial membrane, take hold of it with a tenaculum or some other sharp pointed instrument, withdraw it, and bring the edges of the wound together. If the cartilage should slip away, never grope for it, but bring the edges of the wound together, and no harm will happen, and there will be nothing to hinder the operation being performed on some other opportunity.

It has been supposed that an improvement might be made in this operation, by making a valvular opening; that is, by introducing a narrow sharp-pointed bistoury, puncturing the skin at some little distance, and then dividing the fascia and other parts down to the cartilage, on the principle of the subcutaneous operation performed for the division of tendons. I do not myself see why this method should be preferable to the other; it is not the wound of the skin, but that of the synovial membrane, that makes the danger; and I am satisfied from what I have seen that a principal source of danger is the anxiety of the surgeon to finish the operation, which leads him to grope for the cartilage in the joint when it happens to have slipped away from the wound, instead of waiting for a future day.

#### *Fleshy tumors within the Knee-joint.*

Fleshy tumors sometimes grow from the inner surface of the synovial membrane. I have seen two cases, one under the late Mr. Ewbank in this hospital, and the other in a patient of my own in private practice. In both cases the disease was mistaken, before the operation was performed, for a loose cartilage. In Mr. Ewbank's case he detached and removed it, and the patient recovered without any bad symptoms, but there was reason to believe that the excrescence grew again. In my case the excrescence had a broad attachment, but I divided it and removed it. A good deal of inflammation supervened, but no real harm happened, and the patient recovered. This was upwards of 20 years ago, and he has continued well ever since. Still, I cannot but think that the operation is attended with a certain hazard to the limb; therefore I would not recommend it, except where the disease was productive of very great inconvenience.

#### *Malignant diseases of the knee.*

I have not met with a case of true scirrhus or carcinomatous disease of the knee; but many examples of that form of malignant disease to which the names of medullary disease, and *fungus hematodes*, have been applied, have fallen under my observation; and the appearances which this affection of the joint exhibits are well displayed in the preparations and drawings on the table.

The morbid growth, as far as my experience goes, always has its origin in the cancellous structure of the bone; sometimes of the femur, sometimes of the tibia. When it begins in the tibia it is likely to be detected at an earlier period than when it begins in the femur; for a plain reason, that this bone being less covered by muscles than the femur, any enlargement of it is more apparent.

Sometimes there is, in the first instance, a dull pain referred to the seat of the morbid growth; and this is followed by a slight enlargement of the joint. In other cases the enlargement is the first thing perceptible, there being no ante-

cedent pain. In some instances the patient is not conscious of the existence of any disease until it is suddenly roused into action by some accidental injury. The patient whose limb, after amputation, furnished one of these preparations and drawings, while carrying a heavy weight, slipped with one foot in a hole in the ground; a severe pain in the knee was the consequence, and an enlargement of one of the condyles of the femur was observed for the first time immediately afterwards. In the early stage of the disease the diagnosis is always difficult, and indeed a certain diagnosis cannot be made. The tumor gradually increases, sometimes with much pain, sometimes with little; and, as it increases, the nature of it becomes sufficiently manifest. In some parts it is hard where the external shell of bone remains entire; in other parts, where the bone has disappeared, it is comparatively soft and elastic. In some parts the skin retains its natural appearance, in others it is of a dark red colour, and adheres to the morbid growth beneath. The superficial veins are seen in a dilated state ramifying over the surface of the tumor. For a long time the motions of the joint are not materially impaired; and you will perceive in the specimens before you how large a size the tumor may attain without the cartilage being affected by it. Of course ultimately all the textures of the joint become involved in the disease, and unless amputation be had recourse to the skin itself ulcerates.

As to the treatment of these cases there is little to be said. You have no remedy to offer with the exception of the removal of the limb by amputation. But will the operation produce a cure? I fear that we must answer the question by saying that it will not do so in the great majority of instances. I have, however, met with two cases in which the patients were alive and well many years afterwards, and, indeed, as far as I know, they remain so at the present time, although in one of them the operation was performed seventeen years, and in the other nearly eleven years ago. In each of these cases the morbid growth had begun in the condyles of the femur; it had attained a very large size, but had at its upper part a very abrupt termination; and in sawing through the bone, some way above it, both the bone itself, and the medulla and the medullary membrane, seemed to be in a perfectly healthy state. I own that I have entertained some doubts whether in these cases I had not been in error as to the real nature of the disease, and concluded too hastily that it was of a malignant kind. The amputated joints, however, were fortunately preserved, and on a close examination of them lately, I cannot in their present appearance find any thing to justify this suspicion, and I still feel myself bound to say, that however frequent the failures may be, amputation is occasionally successful. Of course, before you recommend such a proceeding you will satisfy yourselves that the boundaries of the tumor are well defined; that the glands in the groin are free from disease; that there are no signs of disease in any other organ, and that the general health is good. It is reasonable to suppose that there is a greater chance of ultimate recovery where the disease has originated in the head of the tibia, than where it has been seated in the condyles of the femur; as in the former, without having recourse to so hazardous an operation as that of amputation at the hip-joint, you may remove the whole of the bone in which the disease began.

#### *Cartilages and bone of the knee worn away by friction.*

Here is a specimen showing a condition of the knee-joint that is sometimes met with; the cartilage and even the bone are worn away by friction, as if they had been scraped by a chisel or some other hard instrument. This state of things occurs in old cases of inflammation of the synovial membrane where the patients have been liable to the disease for many successive years, and generally in gouty persons; there being in many instances a deposit of lithate

of soda at the same time on the inner surface of the membrane.

I have said that the parts appear as if they had been worn away by friction. But this is not all; if it were so, the cancellous structure of the bone would become exposed, which, as you will perceive, on examining the preparations, is not the case. A process of repair is going on simultaneously with that of destruction, in consequence of which the exposed surface of the bone every where is of a hard and compact texture.

The existence of this singular condition of the joint is indicated by a grating like that of a rusty hinge; a circumstance which the condition of the articulating surfaces at once explains.

A somewhat similar symptom may occur under other circumstances. In young persons, especially in young women, there is sometimes a crackling not only of the knee, but of the other joints, apparently connected with a defective secretion of synovia. In elderly persons the cartilage undergoes an alteration of structure, assuming a fibrous appearance, and this is followed by an absorption of it, so that the surface of the bone is exposed, and the result is a grating, like that of a fracture when the joint is moved. This is one of the changes incident to advanced life, is scarcely to be regarded as a disease, and can no more be remedied by art than grey hair can be restored to its original colour.

#### *Hysterical Affections of the Knee.*

There is a complaint of the knee, of common occurrence, especially in young women of an hysterical constitution, and which is frequently confounded with more serious diseases; so that I have known patients labouring under it to be treated for a long time for scrofulous disease, or ulceration of the cartilage; and, indeed, cases have occurred in which the limb, through this error, had been actually amputated. An hysterical young woman sprains her knee, or thinks that she does so, in walking. She complains of pain; believes, that she cannot walk; she becomes an object of attention, and her family and friends are alarmed by the prospect of a white swelling. I need scarcely state that all hysterical symptoms are aggravated by constant attention to them, and such is the case here. The pain becomes more severe, and at last a surgeon is consulted. He finds the knee no larger than the other, but the patient says it is exceedingly painful. She cannot bear it to be touched or moved, and often lies on the sofa a perfect fixture. On your examining the knee she winces as if it caused her the greatest suffering; and you may observe that the slightest touch will produce as much pain as a heavy pressure. Pinching the skin over the joint occasions more pain than squeezing the surfaces against each other with the hand on the heel. If the limb be examined while the patient's attention is directed to what you are doing, she complains severely, but if the examination be made while she is engaged in conversation, and her mind otherwise occupied, she bears considerable pressure on it without making any complaint whatever. The following are the diagnostic marks of the disease:—*first*, that the patient is of an hysterical constitution, probably she has other hysterical symptoms; *secondly*, that the joint is not swollen; *thirdly*, that a light touch of the skin produces as much pain as a heavy pressure; and, *lastly*, that if the patient's attention be directed to other matters the joint may be handled without causing any pain at all.

For the most part the diagnosis is sufficiently easy. There are some cases, however, which will puzzle a surgeon in spite of a good deal of experience. For instance, a girl labours under this affection of the knee; it has been mistaken for two or three years, leeches have been applied, repeated blisters and stimulating liniments of all kinds have been used to irritate the skin. These applications alter the appearance of the joint, they cause effusion of serum and

lymph beneath the skin: the joint seems swollen, and under this mistaken treatment, continued for two or three years, although there is no disease at all, the knee looks as much like a diseased joint as possible.

This affection is occasionally met with in the hospital, but more frequently in private practice. I am satisfied that a great number of cases that were formerly treated as white swelling of the knee were nothing more than hysterical affections. I have myself mistaken the case, over and over again, in the early part of my professional life; and I suspect there are some who are liable to make the same mistake even at the present day.

The more the attention that is paid to any hysterical disease, the longer it will last. If an hysterical patient has retention of urine, while a catheter is regularly used she will not recover the power of making water herself. So, in this case, so long as the knee is made the subject of surgical treatment, and the surgeon pays his daily visits, and the patient's friends continue to make her complaints a subject of conversation, so long will her recovery be delayed; and hence it is that I have known young women affected in this way, remain on a sofa, the victims of an error, for many successive years.

The first thing to be done is, to direct the attention of the patient to other things. Tell the family not to make her ailments the subject of conversation; and, *above all, do not let her have too much surgical attendance.* Nothing should be done in the way of local application, for it only fixes the thoughts on the part affected. If anything be applied it should be a simple remedy, such as a lotion of camphor mixture and spirits of rosemary; and this should be had recourse to only when the pain is more severe than usual. But try to improve the general health. Probably the menstruation will be found deficient, and some preparation of iron may be exhibited with advantage. In many cases there is a weak circulation, cold hands and feet; and combinations of iron and ammonia with infusion of quassia or some other bitter may be useful. If the patient lives in the metropolis, let her if possible spend a part of the year at the sea side. Above all, do not let her be confined to the sofa. She will say that she has so much pain that she cannot move. Then let her have crutches. Do not urge her to do very much at first, for this will excite suspicion and have a bad moral influence, but persuade her to do what she can without great inconvenience. She will find that she does not suffer as she had anticipated, and then she will be disposed to do a little more, until at last she finds that she can walk as usual. Whether she recovers soon or not will depend mainly on this—whether or not she really wishes to be cured; and in this respect there is a very great difference: some young women, (and, I may add, young men too, for the same train of symptoms sometimes occurs in the other sex), prefer being laid up, and being pined and made much of by their families; while others, being of a higher order of mind, are really anxious to get about, to enjoy the society of their friends, and perform their social duties; and the latter will recover much sooner than the former.

[At a meeting of the Surgical Society of Ireland, held on the 7th of April, 1846, a paper was read by Dr. Bigger, on the use of "*Prussic Acid Vapour in the treatment of Ophthalmic Diseases.*" Some of our readers may not be aware that this supposed remedy was introduced into practice by Dr. Turnbull, of London, who, with Gearsley, Culverwell, L'Amert, and others, though belonging to the profession, had so far forgotten their duty to it, as to have adopted the ordinary methods resorted to by the unprincipled Charlatan for notoriety and

Practice. The value of prussic acid in such cases was soon, however, disproved, even by those whose credulity induced them to make trial of it, and we had fancied that its reputation had descended to the tomb of all the capulets, when, to our surprise, we found that a paper on such a frivolous subject was brought before the learned body above alluded to for its consideration.

We should not, however, have occupied this space in our Journal on such an evidently quackish production, were it not that in doing so we are enabled to introduce the following valuable remarks on "Opacities of the Cornea," by Dr. Jacob, one of the most learned and scientific ophthalmic surgeons of Europe.

In conclusion, we beg to say, that we entirely concur in the following, and have, on various occasions, had an opportunity of satisfying ourselves of its accuracy.—  
E.D.]

Dr. Jacob, in rising at the then advanced hour of the evening, felt that it would be utterly impossible to enter into or attempt to discuss the subject before the society on the present occasion; nor would he think of offering an observation under such circumstances, did he not consider it of the utmost importance that in any medical society, but more particularly in the Surgical Society of Ireland, it should be well understood how far its members gave credit to or concurred in the statements contained in any paper submitted to their consideration. It would appear to him that many of the cures attributed by Dr. Bigger to the use of the prussic acid vapour might be only apparent, and might, perhaps, with more justice, be traced to the natural salutary processes of the animal economy, which in course of time succeed to the formation of those opacities, whether it be the mere subsidence of inflammatory action, or the agency of the absorbents; but for his own part, the conviction on his mind for many years has been—and nothing that he had latterly heard in the least tended to shake it—that however dense these opacities become, were they even as white as paper, they will be obliterated in time, unless the product of destructive alteration in the cornea, consequent on wounds or ulcers; unless, in fact, they are actual cicatrices. For these reasons, then, he knew not when he had resorted to the use of stimulants of any kind in cases of this description. White opacities of the densest kind, resulting from chronic cornitis, attacking the individual off and on for a long period, he had known, after a lapse of a year or two, entirely to disappear, leaving the cornea as clear as crystal, without a single application having been used during the whole time. Diffused nebulous opacities, ten times the size of the original little ulcer, he had in like manner known to disappear; let the process effecting their disappearance be called absorption, or what it may, go they will. It will often happen, Professor Jacob observed, that children or adults present themselves to him with what they call a pearl, and if on examining this it turns out to be the well-defined cicatrix of an ulcer or wound, he at once says—"You may expect that, to a certain extent, the speck will remain; it will never entirely disappear, though after a time it will decrease so much as to be barely perceptible." Well then, he said, if the foregoing remarks be true, it comes to this, that all opacities, whether the consequence of general inflammation extending to the transparent structure of the organ, or resulting from wounds or ulcers, will severally disappear to a greater or lesser extent, if they be not cicatrices. How this is effected, he could not, as he before remarked, undertake to say, but the process, whatever it may be, is

effectual if the opacity be unaccompanied by any disorganization of the corneal structure. Some would say these opacities consisted of deposition of lymph, but how reconcile with that view their persistence for such a lengthened period? He would add, that in that very remarkable affection, *staphyloma pellucidum*, the consequence of long-continued inflammation of the cornea, the opacity is in the beginning well marked of course, but only leave it to time for a while, and the cornea becomes eminently and beautifully transparent. What he stated was, he believed, contrary to the received opinion on the subject, but as he had already said he had long acted under the conviction of its truth. The distinction he had drawn should be remembered—viz., that all opacities, not resulting from wounds or destructive ulceration, will of themselves entirely clear away, but in those which arise from the last mentioned causes, however shallow the original excavation, the opacity remains permanently; and may be seen for twenty years after as a slightly opaque nebula, the healthy operation of the animal economy being insufficient to restore transparency. Stimulation will not do; on the contrary he had often and often known stimulants—not the prussic acid—only increase the evil. To the influence of natural causes, then, he observes, is clearly due all the credit attributed from time immemorial to the popular remedies for the removal of opacities, such as calomel and sugar, the various stimulating drops, &c., and he would unhesitatingly assert that there was no opacity which would yield to stimulants that would not pursue a similar course if left to nature; and it was no less certain, he said, that opacities of the other kind, in other words, the cicatrices resulting from wounds or ulcers, will never entirely vanish. The portion of cornea thus rendered opaque by the healing of wound or ulcer is essentially no longer cornea, for its structure undergoes some marked alteration. At the very time that a remedy has been employed, he would have remarked, it has very often happened that the opacity has disappeared in spite of the remedy. In conclusion, Professor Jacob wished by no means to appear desirous to set at nought the statements made by Dr. Bigger. He merely wished to place his own views, formed on physiological and pathological deductions, before the society. How far the employment of the prussic acid vapour may have tended to hasten the removal of the opacities in the cases cited by Dr. Bigger was quite another point; for his own part, he would willingly hear at a future meeting any objections that might be urged against the views he had just advocated, and would again observe, that his object in at all alluding to the subject under consideration at this late hour was, that the society might not break up with the risk of its going abroad that their entire acquiescence had been given to the opinions expressed.

Dr. Bigger begged to remark that he entirely coincided in opinion with Professor Jacob, as regarded the opacities consequent on deeply penetrating wounds and perforating ulcers—viz., that they probably never completely disappeared by the use of the acid. He wished it to be remembered, too, that he did not come forward as the advocate of the system which he had introduced to the notice of the society, but only as the prover or experimenter on the suggestions of others.

#### REMOVAL OF A PORTION OF THE LIVER FROM THE HUMAN SUBJECT.

Dr. Macpherson, in the northern Journal of Medicine, having referred to two similar cases, records that of a Hindoo, from whose liver a considerable piece was removed during life, and without a fatal result. The man had been stabbed in the side about twelve hours previously to his being brought to the doctor, who found a wound about an inch long, through which a triangular piece of the liver, about the size and shape of four fingers, projected. Finding its

return impossible without enlargement of the wound, Dr. Henderson resolved on cutting it off, and

“To prevent hæmorrhage, a ligature was applied tightly round the base of the protrusion, which was then cut off. Two arterial twigs bled very freely, and it was found necessary to take them up, and a double ligature was also passed through the stump, and tied on either side, when all bleeding ceased. No attempt was made to return the portion of liver which still filled up the wound, as it was desirable to prevent all risk of blood or bile being extravasated into the cavity of the abdomen. For a day or two the patient was rather low, and had slight irritative fever, and the bowels remained costive. These symptoms yielded to a few doses of purgative medicine, and in nine days the ligatures came away along with a small slough of liver; the wound granulated and healed, and the man returned to his home in three weeks. No bilious discharge occurred from the granulating surface of liver. The portion removed, after having lost its blood, and being in spirits for some weeks, weighed 1½ oz., its surface uneven, though not torn, and it is probably a portion of the edge of the right lobe, from near the notch between it and the left.”

“It might be added, that the patient complained of a good deal of pain when the surface of the liver was touched, but that cutting through its substance, caused him hardly any.”

“The old man appeared two months after as prosecutor in his own case; he was in perfect health. There was a little puckering in of the skin about the wound, and the liver was evidently adherent beneath.”

## MIDWIFERY.

### EXTIRPATION OF THE UTERUS SUCCESSFULLY PERFORMED.

By T. L. GREGSON, Esq., Surgeon, Newcastle-on-Tyne.

Mrs. A—had been delivered of her second child, by a surgeon, in a village, two years ago. As she complained of much pain and uneasiness, on the third day, her medical attendant ordered her to get out of bed, and walk smartly across the floor. She improved slowly, and complained much. About a year ago, she came here, and was some months under the care of a surgeon. About six months ago I was called to attend her. I found her extremely emaciated and exsanguine, having for above a year been exhausted by most profuse hæmorrhage at every monthly period. On examination I found a pear-shaped body filling the vagina, the os tincæ embracing it firmly, and apparently adhering at one side. I gradually introduced my fingers, endeavouring to grasp it, and push it through the os tincæ. This procedure caused extreme pain and some hæmorrhage without its yielding in the least: it was of a purplish red colour. Feeling satisfied that it was an almost complete inversion, or, I might say, eversion, of the uterus, I endeavoured, by chalybeates, &c., ergot, and astringents, to improve the system; but every monthly period produced extreme exhaustion, and death seemed inevitable. As a last chance, and with the consent of herself and friends, I resolved to extirpate the uterus. I went, accompanied by my friend, Mr. Frost, a most able accoucheur, and who agreed with me, as she was so exhausted and exsanguine, that the attempt was justifiable. I laid hold of the tumour, and drew it as far down as possible; in so doing, the os tincæ entirely disappeared, leaving no doubt of the nature of the case. A very strong silk cord was then passed around it, and carried high up by the double canula, the cord being also passed through the eye of a strong curved steel staff.

I found this a very valuable means, as I could carry the ligature around the part with the greatest facility. The knot was then tied with great firmness, leaving the staff included in the ligature and opposite the knot; this instrument was secured to the inside of the thigh with a tape. By turning the handle once or twice round, the ligature could be tightened to any degree. This was done from day to day, and caused rapid sloughing of the part. It separated entirely on the ninth day. From the commencement of the operation to its coming away, reaction was very moderate. She required no treatment beyond an occasional anodyne, castor oil, and the catheter used twice. She gained strength rapidly. She was made to keep the recumbent posture twenty days. It is now three months since the operation. She goes about the house, and has walked out a little, feeling easy and comfortable.

Such cases being generally considered hopeless, I have detailed

particulars, perhaps minutely. I believe the great point to be kept in view when the ligature is used, is to tie it with great firmness at once.

On examining the part, I find that the body and neck of the uterus are entirely removed. There has been no disturbance at the monthly periods, nor symptoms of the system, feeling the want of the organ removed.—*Lancet*.

## CHEMISTRY, MATERIA MEDICA AND PHARMACY.

### ON NEW MAGNETIC ACTIONS, AND ON THE MAGNETIC CONDITION OF ALL MATTER;

By MICHAEL FARADAY, Esq., D. C. L., F. R. S., &c.

“Experimental Researches in Electricity,” 20th series, sect. 26th. (Phil. Mag., Feb. 1846, xxviii, 147.)—The following is the order in which the several divisions of the subject treated of in this section of the author’s researches in electricity, succeed one another:—1. Apparatus required. 2. Action of magnets on heavy glass. 3. Action of magnets on other substances acting magnetically on light. 4. Action of magnets on the metals generally. 5. Action of magnets on the magnetic metals and their compounds. 6. Action of magnets on air and gases. 7. General considerations.

In giving an account of the contents of this paper, an attempt to follow the track of the author in the precise order in which he relates the consecutive steps of his progress in this new path of discovery, would fail of accomplishing its object: for, by adhering to such a course, it would scarcely be possible to comprise within the requisite limits of an abstract, the substance of a memoir extending, as the present one does, to so great a length, and of which so large a portion is occupied with minute and circumstantial details of experiments; or to succeed in conveying any clear and distinct idea of the extraordinary law of nature brought to light by the author, and of the important conclusions which he has deduced.

One of the simplest forms of experiment in which the operation of this newly discovered law of magnetic action is manifested, is the following:—A bar of glass, composed of silicated borate of lead, two inches in length and half an inch in width, and in thickness, is suspended at its centre by a long thread, formed of several fibres of silk cocoon, so as to turn freely, by the slightest force, in a horizontal plane, and is secured from the agitation of currents of air by being enclosed in a glass jar. The two poles of a powerful electro-magnet are placed one on each side of the glass bar, so that the centre of the bar shall be in the line connecting the poles, which is the line of magnetic force. If, previous to the establishment of the magnetic action, the position of the bar be such that its axis is inclined at half a right angle to that line, then, on completing the circuit of the battery so as to bring the magnetic power into operation, the bar will turn so as to take a position at right angles to the same line; and, if disturbed, will return to that position. A bar of bismuth, substituted for the glass bar, exhibits the same phenomenon, but in a still more marked manner. It is well known that a bar of iron, placed in the same circumstances, takes a position coincident with the direction of the magnetic forces; and therefore at right angles with the position taken by the bar of bismuth subjected to the same influence. These two directions are termed by the author *axial* and *equatorial*; the former being that taken by the iron, the latter that taken by the bismuth.

Thus it appears that different bodies are acted upon by the magnetic forces in two different and opposite modes; and they may accordingly be arranged in two classes: the one, of which iron is the type, constituting those usually denominated *magnetics*; the other, of which bismuth may be taken as the type, obeying a contrary law, and therefore coming under the generic appellation of *diamagnetics*. The author has examined a vast variety of substances, both simple and compound, and in a solid, liquid, or gaseous form, with a view to ascertain their respective places and relative order with re-

ference to this classification. The number of simple bodies which belong to the class of magnetics is extremely limited, consisting only of iron, which possesses the magnetic property in an eminent degree, nickel, cobalt, manganese, chromium, cerium, titanium, palladium, platinum and osmium. All other bodies, when either solid or liquid, are diamagnetic; that is, obey the same law, with regard to magnetic action, as bismuth, but with various degrees of intensity: arsenic is one of those that give the feeblest indications of possessing this property. The following exhibit it in increasing degrees, according to the order in which they are here enumerated; namely, ether, alcohol, gold, water, mercury, flint glass, tin, lead, zinc, antimony, phosphorus, bismuth. On the other hand, no gaseous body of any kind, or in any state of rarefaction or condensation, affords the slightest trace of being affected by magnetic forces. Gases may therefore be considered as occupying the neutral point in the magnetic scale, intermediate between magnetic and diamagnetic bodies.

The magnetic properties of compound bodies depend on those of their elements; and the bodies are rendered either magnetic or diamagnetic according to the predominance of one or other of these conditions among their constituent parts. Thus iron is found to retain its magnetic power when it has entered into combination with other bodies of the diamagnetic class; the two forces acting in opposition to one another, and the resulting effect being only that due to the difference in their power. Hence the oxides and the salts of iron are still in a certain degree magnetic, and the latter even when they are held in solution by water; but the water may be present in such a proportion as that neither shall prevail; and the solution, as far as respects its magnetic properties, will then be exactly neutralized. These saline solutions, prepared of various degrees of strength, also afford a convenient method of comparing the relative degrees of force, both magnetic and diamagnetic, of different bodies, whether solid or fluid, but more especially the latter, as they admit of the body under examination being suspended in another liquid, when its position of equilibrium will indicate which of the two substances has the strongest magnetic power.

In one respect, indeed, the diamagnetic action presents a remarkable contrast with the magnetic; and the difference is not merely one of degree, but of kind. The magnetism of iron and other magnetics is characterized by polarity; that of diamagnetics is devoid of any trace of polarity; the particles of two bodies of the latter class, when jointly under the influence of the magnetic forces, manifest towards each other no action whatever, either of attraction or repulsion. It has long been known that the magnetism of iron is impaired by heat; and it has been generally believed that a certain degree of heat destroys it entirely. The author finds, however, that this opinion is not correct; for he shows that, by applying more powerful tests than those which had been formerly considered in, iron, nickel and cobalt, however high their temperature may be raised, still retain a certain amount of magnetic power, of the same character as that which they ordinarily possess. From the different temperatures at which the magnetic metals appear to lose their peculiar power, it had formerly been surmised by the author, that all the metals would probably be found to possess the same character of magnetism, if their temperature could be lowered sufficiently; but the results of the present investigation have convinced him that this is not the case, for bismuth, tin, &c., are in a condition very different from that of heated iron, nickel or cobalt.

The magnetic phenomena presented by copper and a few other metals are of a peculiar character, differing exceedingly from those exhibited by either iron or bismuth, in consequence of their being complicated with other agencies, arising from the gradual acquisition and loss of magnetic power by the iron core of the electro-magnet, the great conducting power of copper for electric currents, and its susceptibility of being acted upon by induced currents of magneto-electricity, as

described by the author in the first and second series of these researches. The resulting phenomena are to all appearance exceedingly singular and anomalous, and would seem to be explicable only on the principles referred to by the author.

Pursuing his inductive inquiries with a view to discover the primary law of magnetic action from which the general phenomena result, the author noticed the modifications produced by different forms given to the bodies subjected to experiment. In order that these bodies may set either axially or equatorially, it is necessary that their section, with reference to the plane of revolution, be of an elongated shape: when in the form of a cube or sphere, they have no disposition to turn in any direction; but the whole mass, if magnetic, is attracted towards either magnetic pole; if diamagnetic, is repelled from them. Substances divided into minute fragments, or reduced to a fine powder, obey the same law as the aggregate masses, moving in lines which may be termed *diamagnetic curves*, in contradistinction to the ordinary magnetic curves, which they every where intersect at right angles. These movements may be beautifully seen by sprinkling bismuth in very fine powder on paper, and tapping on the paper while subjected to the action of a magnet.

The whole of these facts, when carefully considered, are resolvable, by induction, into the general and simple law, that while every particle of a magnetic body is attracted, every particle of a diamagnetic body is repelled, by either pole of a magnet. These forces continue to be exerted as long as the magnetic power is sustained, and immediately cease on the cessation of that power. Thus do these two modes of action stand in the same general antithetical relation to one another as the positive and negative conditions of electricity, the northern and southern polarities of ordinary magnetism, or the lines of electric and of magnetic force in magneto-electricity. Of these phenomena, the diamagnetic are the most important, from their extending largely, and in a new direction, that character of duality which the magnetic force was already known, in a certain degree, to possess. All matter, indeed, appears to be subject to the magnetic force as universally as it is to the gravitating; the electric, the cohesive and the chemical forces. Small as the magnetic force appears to be in the limited field of our experiments, yet when estimated by its dynamic effects on masses of matter, it is found to be vastly more energetic than even the mighty power of gravitation, which binds together the whole universe: and there can be no doubt that it acts a most important part in nature, and conduces to some great purpose of utility to the system of the earth and of its inhabitants.

Towards the conclusion of the paper, the author enters on theoretical considerations suggested to him by the facts thus brought to light. An explanation of all the motions and other dynamic phenomena consequent on the action of magnets on diamagnetic bodies, might, he thinks, be offered on the supposition that magnetic induction causes in them a state the reverse of that which it produces in magnetic matter: that is, if a particle of each kind of matter were placed in the magnetic field, both would become magnetic, and each would have its axis parallel to the resultant of magnetic force passing through it; but the particle of magnetic matter would have its north and south poles opposite to, or facing the contrary poles of the inducing magnet; whereas, with the diamagnetic particles, the reverse would obtain; and hence there would result, in the one substance, approximation; in the other, recession. On Ampère's theory, this view would be equivalent to the supposition that, as currents are induced in iron and magnetics, parallel to those existing in the inducing magnet or battery wire, so, in bismuth and other diamagnetics, the currents induced are in the contrary direction. As far as experiment yet bears upon such a notion, the inductive effects on masses of magnetic and diamagnetic metals are the same.

2. *Researches on the Relations of Light and Magnetism*; by M. FARADAY, Royal Institution, Jan. 23.—(Athenæum,



No. 953, Jan. 31, 1846, p. 126.)—We shall confine ourselves to the method by which Prof. Faraday exhibited the great fact of his researches—the rotation of a ray of light by magnetic force. The well known oxy-hydrogen light of Drummond supplied the ray. This light was so directed by an arrangement furnished by Mr. Darker, as to make distinctly visible over the whole theatre, all the phenomena of circular polarization which were required to illustrate Prof. Faraday's newly discovered principle. A beam of common light was shown to be separable into two distinct rays of polarized light; and the properties of these, and their relation to each other, were repeatedly demonstrated to the spectators. Such being the subject of his operations, Prof. Faraday next exhibited the nature and extent of the force employed to accomplish his results. That force is magnetism derived from an electro-magnet of immense size and power. The magnet used was a half link of the former East India moorings, surrounded by several coils of thick copper wire, and the source of electric power was Grove's battery, about twenty cells of which were employed on this night. To give an idea of the force of this electro-magnet, Prof. Faraday mentioned that once, while he was at work in the laboratory, an iron candlestick which happened to be standing on the table near its poles, instantly flew to them, attracted with such violence as to displace or break every thing in its way. The great experiment of the evening was then successfully tried. A prism of heavy glass was so adjusted between the poles of the magnet, as to receive the oxy-hydrogen light after it had been polarized, and before it was depolarized by Nicholl's eye-piece. The following facts, demonstrating the magnetism of light, were then exhibited:

1. As to the rotation of the ray.—A polarized ray, having been extinguished by the depolarizing plate, was instantaneously restored when the magnetic current was sent through the prism through which the ray was transmitted: and conversely, the polarized ray, when, by the common adjustments of the plate, it had been made visible, was extinguished by the force of the current.

2. As to the relations of this electro-magnetic power to other laws of polarized light.—The rotation having been established, it was shown, that the direction of the rotation was absolutely dependent on that of the magnetic force. That, while in common circular polarization, the ray of light always rotates in the same direction with regard to the observer, (to whatever part of the medium his view may be directed,) it is very different in the state of the ray induced by this new force. When brought under the influence of the magnetic current, polarized rays always rotate in a constant direction with respect, not to the observer, but to the plane of the magnetic curves.

Prof. Faraday concludes, by throwing out some general notions as to the possible development of these researches in the line of future investigations. It did not seem impossible to him, that the sun's rays might be found to originate the magnetic force of the earth, and the air and water of our planet might be proved to be the diamagnetic media in which this condition of the force was eliminated.

M. Pouillet has repeated the experiments of Faraday, and communicated a report to the Academy of Sciences of Paris, (L'Institut, No. 630.) He is of the opinion that the phenomena are due to action on the transparent medium, or upon the forces which govern its molecules, and not on the luminous ray itself.—*Amer. Jour. of Science and Arts, May, 1845.*

#### GRADUAL RISE OF NEWFOUNDLAND ABOVE THE SEA.

(Jameson's Jour. Jan. 1846.)—It is a fact worthy of notice, that the whole of the land in and about the neighbourhood of Conception Bay, very probably the whole island, is rising out of the ocean at a rate which promises, at no very distant day, materially to affect, if not to render useless, many

of the best harbours we have now on the coast. At Port de-Grave a series of observations have been made, which undeniably prove the rapid displacement of the sea-level in the vicinity. Several large flat rocks, over which schooners might pass some thirty or forty years ago with the greatest facility, are now approaching the surface; the water being scarcely navigable for a skiff. At a place called the Cosh, at the head of Bay Roberts, upwards of a mile from the sea-shore, and at several feet above its level, covered with five or six feet of vegetable mould, there is a perfect beach, the stones being rounded, of a moderate size; and in all respects similar to those now found in the adjacent land-washes.—From the *Newfoundland Times.*

*To keep Iron-Filings from Rust'ng.*—(Pharmaceutisches Cent Blatt, 1845, p. 495.)—Iron filings, even in well-stopped bottles, will rust; in order to prevent this, M. Ringlein rubs up the filings with an equal weight of dry sugar, when they can be kept, even in paper, for a great length of time without rusting.

*To prevent Extracts and Plasters from Moulding.*—(Pharmaceutisches Cent. Blatt, 1845, p. 512.)—M. Guiliemo, in order to prevent the mould that forms upon the surface of extracts, has been in the habit, for fifteen years, of covering the surface with a layer of refined sugar about the tenth of an inch thick, before tying up the jar. The sugar crystallizes upon the surface, and prevents any change taking place there. Some plasters, such as *empl. conii, cantharid., hyosc., melilot.* are particularly subject to mould.

*Adulteration of Iodine.*—(Jahrb. für Prakt. Pharm. xi, p. 35, and Chem. Gaz., January, 1846, p. 47.)—M. Herberger draws attention to the fact, that with the present high price of iodine, sophistications are uncommonly frequent. Thus he found in one sample native sulphuret of antimony. But the adulteration with artificial graphite is far more deceptive; it may, however, be readily detected by driving off the iodine at a gentle heat, and subsequently raising the temperature with access of air. In one instance the author found no less than 51 per cent. of graphite.

*Disinfection of Bodis for Anatomical Purposes.*—(Lond. Med. Gaz., Feb. 1846, p. 262.)—We learn from a report in a late number of the *Gazette Médicale*, that a new method has been discovered for the preservation of dead bodies. The subjects used for dissection at the *Ecole Pratique* have been preserved by this process, and so perfectly had it succeeded, that the bodies were in exceedingly good condition, after having been in the hands of the pupils for several weeks. The plan consists in injecting into the arteries a strong solution of the sulphite of soda in water. Putrefaction is thereby arrested for several weeks, and for further preservation, lotions of the chloride of zinc may be used. When subjects are thus treated, the organs preserve their form and natural colour; the steel instruments used in dissection undergo no change, and there is no smell even at a short distance from the body. This important result is likely to have a beneficial influence on the health of medical pupils, and on the pursuit of anatomy.—We cannot answer for the success of this plan, but the reporter speaks most confidently of it. The sulphite of soda probably acts by absorbing oxygen and becoming converted to sulphate. The sulphite is easily made by passing sulphurous acid gas (obtained by boiling copper-clippings in oil of vitriol) into a saturated solution of carbonate of soda, until effervescence ceases.

*Preservation of Lunar Caustic.*—(Journ. de Pharm., vol. xlii, p. 320.)—Dumétil covers the sticks of caustic with a layer of sealing-wax, containing a large proportion of shell-lac, which adheres strongly to it. These sticks may then be used just like pencils; the end to be used only requires to be uncovered with a penknife.—*Southern Journal of Medicine and Pharmacy.*

*Discovery of another new metal.*—Professor Claus, in the *Chemical Gazette*, Feb. 1845, announces the discovery of a new platinum metal, to which he has given the name of Ruthenium. It is associated with native platinum, and is procured from what is called the platinum residu, obtained after treating the platinum by nitro muriatic acid, in which it exists along with Osmium and Iridium.—*American Journal of Science and Arts, Jan. 1846.*—*Ranking's Abstracts.*

## PREPARATION OF TINCTURE OF ACONITE.

In an inaugural dissertation for the degree of M. D. at the University of Edinburgh, "on the physiological and medicinal properties of the aconitum napellus," by Dr. Fleming, the following formula for the preparation of the tincture is recommended.

"Take of the root of the aconitum napellus, well dried and pounded sixteen ounces troy, rectified spirits sixteen fluid ounces; macerate four days, strain and add spirit till twenty-four ounces are obtained.

This tincture is beautifully transparent, and of a slightly bitter taste. Dose as an *anodyne, antineuralgic and calmative*, *M. v.* three times a day, increased daily by *M. j.* per dose. As an *antiphlogistic M. v.* repeated four hours after the first dose. In order to sustain the sedative effects thus induced *M. ii. ss.* are to be given every three or four hours. The author cautions the practitioner that in exhibiting the drug, after this plan, the patient ought to be seen and his pulse examined before each dose; if it cannot be done, he advises that it should be given as in the anodyne method above mentioned. The tincture has been used externally by the author, rubbed on the affected part.

## British American Journal.

MONTREAL, JUNE 1, 1846.

## THE MEDICAL BILL.

This Bill, which we anticipated at the commencement of this Session of the Provincial Parliament, would ere now have received viceregal sanction, has been farther postponed to the succeeding Session. We view this postponement as a judicious measure; it was the only means of paralysing the opposition manifested to the Bill by those who advocate an increased, and an inevitably increasing number of interested licensing boards for the Province, a sure result which would have been ruinous to the best interests of the Profession generally. In the meanwhile the Profession of Canada must be acting in the matter; they *must* utter their sentiments to the next Legislature, and they must speak them boldly and undisguisedly. The question at issue is one of vital moment, and must not be neglected. Its importance we have fully exhibited in our previous number; and confident in the validity and soundness of the arguments which we have employed, we feel assured we shall be supported in the position which we have assumed. We speak for the general good of the Profession, and not for the advantage of any particular party. Our convictions are dispassionate, and deliberate, and we firmly believe that the pretensions which we have exposed, would not be supported by a large number of even the French Canadian practitioners.

## COLLEGE OF PHYSICIANS &amp; SURGEONS OF UPPER CANADA.

—We received, a short time before the last number of our Journal was published, from the Secretary of the Toronto Medico-Chirurgical Society, a copy of the Petition of that body to the two Houses of the Legislature, for the purpose of incorporating a College of Physicians and Surgeons in Upper Canada. The crowded state of our columns prevented us at that time from giving insertion to the Petition, and doing so now would be superfluous, as a Bill has been introduced by Mr. Solicitor General Sherwood based upon it, to which we now give publicity in another place, and which is an embodiment of the sentiments conveyed in the Petition. Against the principle of the Bill, we are not aware that any opposition will be offered. The profession in Canada West are agreed upon that point so far as we understand; we would that we could say as much in reference to the Medical Bill which would have operated in this section of the Province. In unanimity, the Upper Canadians have set an example to the Lower Canadians, which it would be highly desirable that the latter should at least appear to imitate. In all such cases, as the ostensible benefit of legislation is direct public benefit, every selfish feeling and sentiment should yield, and give place to a pure feeling of patriotism. Much as we regret to say it, the events of a few years have disclosed a gradually widening line of separation between the Anglo and Franco-Canadian practitioners of this part of the Province. We sincerely deplore it. It is an event which can be attended with no possible advantage or interest to either party; but, on the contrary, will be surely followed by most serious results—results which affect less the profession than the public, who will be in reality the sufferers. But the causes which have tended, and are tending to that result, open a field for consideration, to which we shall probably recur in some future number.

UNITED STATES NATIONAL MEDICAL CONVENTION.—We copy from the Boston Medical and Surgical Journal the following condensed report of the proceedings of the Convention. It will be observed that the Schools of Philadelphia have taken no part whatever in the proceedings; in fact, they have positively declined all activity in the matter: but we doubt not, from the celebrity which they have deservedly acquired, and their known zeal in the cause of science, that when once a higher standard of professional acquirement is proclaimed by the voice of the profession over the country, they will not be the last to follow it up:—

*National Medical Convention.*—The delegates to this Convention met at the Medical College of the University of New York on Tuesday May 5. At the preliminary organization,



Dr. Bell of Philadelphia, was Chairman, and Dr. Buel, of New York, Secretary. The committee appointed to examine the credentials of the delegates, reported that all accredited delegates from any regularly organized society, local and voluntary associations as well as regular colleges, institutions and societies, be considered members of the convention, which report was accepted. Sixteen States were found to be represented (by delegates from State or other societies), and a committee of one from each State was appointed to nominate officers to the Convention, who presented the following nominations, which were unanimously confirmed, viz.: For President, Dr. J. Knight, of New Haven, Conn.; for Vice-Presidents, Dr. Edward Delafield, of New York City, and Dr. John Bell, of Philadelphia; for Secretaries, Dr. Arnold, of Savannah, Geo., and Dr. Stille, of Philadelphia. Dr. G. S. Bedford, representing the University of New York, then moved that whereas the original object of the Convention, that of a National representation, for the good of the profession, had been defeated by the non-representation of many of the States, and most of the Medical Colleges and Societies, the Convention adjourn, *sine die*. This motion was seconded by Dr. Paterson, also of the New York University. The vote was taken individually, and not by States, and was decided by yeas 2; nays, 74. On account of this motion, Dr. Clymer, of Philadelphia, moved that the future sittings of the Convention be held elsewhere than at the University College; and another member proposed an amendment, that an adjournment immediately be made to the College of Physicians and Surgeons. Drs. Bedford and Paterson disclaimed all intention of opposing the Convention, and it was decided that Dr. Clymer's motion be laid on the table. A committee of nine was appointed to bring the subject of Medical Education before the Convention, consisting of Drs. Davis, March, Hayes, Walter, Bush, Bell, Haxhall, and the President.

The accredited delegates present on Tuesday were from the following institutions:—Vermont—Castleton Medical College, Vermont Medical College; N. Hampshire—Centre District Medical Society; Connecticut—State Medical Society and Medical Institution of Yale College; New York—State Medical Society, Medical Society of City and County, Bloomingdale Asylum, College of Physicians and Surgeons, King's Co. Medical Society, University of the City of New York, Buffalo Medical Association, Erie Co. Medical Society, Albany Medical College, Geneva Co. Medical Society, Geneva Medical College, Madison County Medical Society, New York Hospital; Pennsylvania—Philadelphia Medical Society, Pennsylvania College; New Jersey—private individuals; Delaware—State Medical Society, Medical Association of Wilmington; Maryland—Medical College of Baltimore; Virginia—State Medical Society; Georgia—State Medical Society; Mississippi—State Medical Society; Indiana—La Porte University; Illinois—Medical Department of Illinois College; Tennessee—State Medical Society; Rhode Island—State Medical Society. And on Wednesday, the State Medical Societies of Vermont and Missouri were represented, also the Lunatic Asylum of Hudson and the New York Lunatic Asylum.

The following resolutions were presented on Wednesday by Dr. Davis, of the Committee on Medical Education, and after discussion were unanimously adopted:—

“Whereas it has been shown by experience that the association of persons engaged in the same pursuit, facilitates the attainment of their common objects; therefore,

“1st. Resolved, that it is expedient for the Medical Profession of the Universities, to institute a *National Medical Association*, for the protection of their interests, for the maintenance of their honour and respectability, for the advancement of their knowledge, and the extension of their usefulness.

“2d. Resolved, that a Committee of seven be appointed to report a plan of organization for such an association, at the

meeting to be held in Philadelphia, on the first Wednesday in May, 1847.

“3d. Resolved, that a Committee of seven be appointed to prepare and issue an Address to the different regularly organized Medical Societies, and chartered Medical Schools, in the United States, setting forth the objects of the National Medical Association, and inviting them to send delegates to a Convention, to be held in Philadelphia on the first Wednesday in May, 1847.

“4th. Resolved, that it is desirable that a uniform and elevated standard of requirements for the degree of ‘M.D.’ should be adopted by all the Medical Schools in the United States, and that a Committee of seven be appointed to report on this subject, at the meeting to be held in Philadelphia, on the first Wednesday in May, 1847.

“5th. Resolved, that it is desirable that young men, before being received as students of medicine, should have acquired a suitable preliminary education, and that a Committee of seven be appointed to report on the standard of acquirements, which should be exacted of such young men, and to report at the meeting, to be held on the first Wednesday in May, 1847.

“6th. Resolved, that it is expedient that the Medical Profession in the United States should be governed by the same code of Medical Ethics, and that a Committee of seven be appointed to report a code for that purpose, at a meeting to be held in Philadelphia, on the first Wednesday in May, 1847.”

Dr. O. S. Bartles, of New York, offered the following resolution, which, after considerable discussion, was referred to a committee of seven, by a vote of 53 to 23.

“Resolved, that the Union of the business of teaching and licensing, in the same hands, is wrong in principle, and liable to great abuse in practice. Instead of conferring the right to license on medical colleges, and State and county medical societies, it should be restricted to one board, in such State, composed, in fair proportion, of representatives from the medical colleges, and the profession at large, and the pay for whose services, as examiners, should, in no degree, depend on the number licensed by them.”

The Chairman announced the various committees on Dr. Davis's resolutions—as follows:—

—“On the Organization of the National Medical Institution”—Drs. J. Watson, Stearns, Campbell Stewart, Stille, Davis, Cogswell, Fenner.

“On the Address”—Drs. Knight, Ives, Dow, Sumner, McNaughton, Blatchford, Boswell, Baxley.

“On the Requirements for a Degree”—Drs. Haxhall, Cullen, Paterson (Va.), Norris, Flint, Perkins, Wing.

“On Preliminary Education”—Drs. Cowper, Bush, Thompson (Del.), March, Atlee, Brainard, Mead.

UNIVERSITIES IN FRANCE GRANTING AD PRACTICANDUM DIPLOMAS.—The following extract, from a report of the proceedings of the Medical Convention held in Paris last November, taken from the last number of the New York Journal of Medicine, and copied from the *Lancet*, will correct an error into which we had unintentionally fallen in an article in our previous number, containing the statistics of the ratio of Schools of Medicine granting *ad practicum* diplomas to the population:—

“The medical profession in France, as far as medicine and surgery are concerned, constitutes part of the University of France, which is itself under the jurisdiction of the Minister of Public Instruction. The University of France is composed of five faculties, the faculty of theology, the faculty of sciences, the faculty of arts (letters), the faculty of law, and the faculty of medicine. Some of these faculties are multiple. Thus there

are three distinct faculties of medicine, those of Paris, Montpellier and Strasburg. The three faculties of medicine all present the same organization, with the exception that the one in Paris has a larger number of professors, and is more efficiently composed than the other two. They all examine and grant degrees. In addition, there are a number of secondary medical schools in the large provincial towns, the certificates of which are received for part of the curriculum, but which have no power to examine or to give diplomas. The degrees awarded by the faculties of medicine are those of doctor in medicine, doctor in surgery, and officer of health (*officier de santé*).

**PROFESSORSHIP OF ANATOMY IN THE UNIVERSITY OF EDINBURGH.**—By private letters, we have received intelligence of the appointment of Mr. Goodsir to the above Chair, vacant by the retirement of Professor Munro. We look upon the appointment of Mr. Goodsir as a propitious one for the University. Dr. Handyside who is worthily supplying Mr. Knox's place in Edinburgh, was his only opponent at the time of the election, which rests with the City Council.

**MONTREAL GENERAL HOSPITAL.**—The election at the meeting of Governors for the election of officers to this Institution, on the second Tuesday of May, for the situation of attending Physician, vacant by the decease of the late Dr. MacNider, resulted in favour of Dr. MacDonnell. The medical staff of the Hospital, is now composed as follows: A. F. Holmes, M. D., Consulting Physician; attending Physicians, O. T. Bruneau, M. D., A. Hall, M. D., G. W. Campbell, M. D., S. C. Sewell, M. D., J. Crawford, M. D., and R. L. MacDonnell, M. D.; House Surgeon, Alex. Long, M. D.; Apothecary, G. D. Gibb, M. D., The average number of in-door patients treated at this Hospital for the last three years, is 1449—and the annual number of out-door patients is estimated at about double that amount.

**GRADUATION AT THE UNIVERSITY OF M'GILL COLLEGE IN THE FACULTY OF MEDICINE.**—On Monday, May 25, the day appointed by the Statutes, the following gentlemen were admitted to the degree of Doctor of Medicine and Surgery:—

- Peter H. Church.—Aylmer, C. W. Acute Laryngitis in Epidemic form on the Rideau Canal.  
 George Duncan Gibb.—Montreal. On Morbid States of the Urine.  
 Henry Paradis.—Yamaska. On Tubercle in the Lungs.  
 George Augustus Scriven.—Montreal. Abortion.  
 James J. Dickinson.—Cornwall, C. W. The natural and Medical History and Curative action of Mercury.  
 Alfred Malhot.—Vercheres. On the Physiology and Pathology of Serous Membranes.  
 William Kelly, Surgeon, R. A. Pneumonia with Delirium.  
 T. Willbod Wilscam, Montreal—Variola.  
 Andrew H. Staunton, Assistant—Vergara R.A.—Ptosis.  
 Stephen S. Foster, Shefford—Scarlatina.  
 Adam T. Jackson, Staff Surgeon—Apoplexy.

**PROVINCIAL MEDICAL BOARDS.**—List of gentlemen who passed their examinations at the May meeting of the Montreal Medical Board:

- 1.—As Physicians, Surgeons, and Accoucheurs:  
 Peter McDougall, Darby Bergin,  
 Edward Barry, Geo. A. Purvis,  
 Jas. J. Beemer, Alfred Bowlby.  
 James A. McKay.

- 2.—As Apothecaries.  
 B. Workman, C. T. Sims, and Geo. Harding.  
 At the Quebec Medical Board, May Meeting, as Physicians, Surgeons, and Accoucheurs.  
 Benjamin Jameson, Thos. McGrath, L. T. Sinclair,  
 W. H. Ellsworth, Brock Carter, I. F. X. Beigne, E.  
 W. Poisson, Gabriel L'Etourneux and David Delisle.

CORRESPONDENCE.

THE PRESENT CONDITION OF THE PROFESSION OF MEDICINE COMPARED WITH THAT OF THE LAW, &c.

(To the Editors of the British American Journal.)

GENTLEMEN.—In almost all communities, and in every age, there have been found individuals and classes of men, who seem, by some strange fatality, to have been doomed to a state more or less perfect of Helotage in relation to the rest of society, and, strange and unnatural as it may appear, it is nevertheless true, that, in our own times, this reproach is shared by two classes of persons, each in its separate sphere occupying a conspicuous place among the benefactors of mankind. The reader will scarcely fail to recognise as the representatives of these classes, *the Physician and the man of letters.*

As I bear no relationship to the "gifted sons of genius," it would be an act of presumption on my part to meddle in any way with their affairs; nor are they any longer amenable to the censure I propose to pass upon the former, inasmuch as they have lately endeavoured, in a manly, straight forward, and rational manner, to obtain from the world a recognition of their right to enjoy permanently the fruit of their own labour, though, as yet, the effort has proved only partially successful!

"Help yourself, and the Lord will help you," is a time-honoured precept: it must have been one of the first lessons taught by experience. It is certainly one of those the breach or the observance of which is of the greatest importance in the business of life. Believing, as I do, that the degraded state of the medical man, may be traced to the breach, the prosperous condition of the lawyer, the divine, and others, in a great measure, to the observance of this maxim, and in the hope that this view of the case, if well sustained, either by direct or analogical evidence, may assist to arouse the slumbering energies of my brethren, I shall endeavour to furnish your readers with a short but faithful description of the respective professional positions of the member of the bar, and the physician, and surgeon, in this part of Canada. It is scarcely necessary to go beyond the limits of this city for materials to fill up the picture; the family likeness is strongly marked everywhere. We learn from the statistics of Toronto, that there are within its boundaries at the present time, thirty regular practitioners of medicine and surgery, and about eighty barristers and attorneys at law. The whole population, according to the last census, amounts to 20,000, or thereabout, and if we add to this number the in-

cidental practice of the rural districts in the neighbourhood, the number of medical men, though large, does not appear altogether out of proportion to the population; but alas! we have also twenty unauthorised practitioners, in the shape of druggists, apothecaries, venders of nostrums from the United States, and quack doctors par excellence: the consequences resulting from this state of things, are, of course, most injurious to the *privileged*? practitioner; shall we ascribe them to the ignorance and credulity of the public, or to the apathy of the victim? I shall revert to this question on another occasion.

Turn we now to the lawyers:—what an imposing phalanx! Yes, we have domiciled among us more than eighty cheerful and comfortable looking gentleman, who sport the Toga, attended, too, by their clients; although the retinue of some individuals may be small, yet there are few, I believe, who cannot boast of some followers; but then there are no *illicit* lawyers; these children have taken special care that *their* bread shall not be cast to dogs. The pettifogger, that embodiment of impudence, and a certain other quality common to all impostors, has disappeared from the stage. Let the reader follow me to a stately temple, and behold another evidence of their prosperity; let him examine its architecture, its beautiful proportions and magnitude, and tell me if there is any other public edifice in British America that can bear a comparison with Osgood Hall, the *Palatium Principality Legis*. This structure was erected by the *incorporated* members of the bar of Upper Canada. I am not writing in the spirit of envy; very far from it: on the contrary, I wish to do honour to the energy and perseverance, the gentlemanlike unanimity, and freedom from individual selfishness and jealousy that characterise the members of this noble profession—qualities that have obtained for them the undisputed possession of all the privileges that of right belong to them, and all those substantial advantages that follow in their train: it would have been strange indeed, if the united influence of such qualities had failed of its object. Permit me to proceed with my contrast.

The Profession of Medicine is recognised in the laws of the land; and the recognition is accompanied with the concession of certain privileges: The infirmities of the species here, as elsewhere, render the existence of such a profession indispensable. Its members are not inferior in point of education to any other class of men: they are quite as zealous in the pursuit of knowledge; not less industrious, nor less faithful in the performance of their duties than the lawyer or the divine.

Yet while this kind of equality is generally acknowledged, they are denied an equality of rights: the laws enacted ostensibly for *their* protection, have proved a protection to the quack, and an encouragement to the sale of nostrums, manufactured in the United States for the Canadian market. The bill at present before the House is scarcely less objectionable than the old act; witness the clause for the regulation of the practice of midwifery by women in country places, where the woman is permitted to seek what she might not be able to obtain in her own, or the adjoining parish, in a remote part of the district: witness the clause for the suppression of illicit practice (clause 12) where the offender may evade the penalty by refusing payment until after the expiration of three months from the commission of the offence. Though other faults might be pointed out, these are sufficient to condemn the bill.

Since the foregoing was written, I have been favoured with a printed copy of a Bill to Incorporate a College of Physicians and Surgeons in Upper Canada; here the desideratum is almost supplied. Two or three trifling alterations and additions would make it perfect: for instance, in clause IV. the payment of a fee of £5 by every newly created fellow would be advisable, and in clause X. the erasure of the word "fellow," where it occurs in the 3rd line\*, and the re-

duction of the fee of admission for a member, to £1 10s, or £2, would meet with general approval. Then the total erasure of the last provision of the IXth clause (this, indeed, must have been an oversight), and the adoption of a clause to regulate the practice of midwifery by women would be an important amendment. But alas! even this measure has found opponents already, and there is but too much reason to fear that it *may* share the fate of every preceding endeavour to ameliorate our condition. The petty jealousies of some five or six individuals (formerly members of the Medico-Chirurgical Society, but who, while under the influence of private pique, thought proper to separate themselves from it) have been called into play by the circumstance of their being no longer in a situation to participate in the immediate benefits that would accrue to their old associates from the passage of the bill, and they are now actually engaged in an attempt to arrest its progress. What a lesson do these facts furnish! Is it possible to doubt, with such evidence before us, that the principal cause of all the grievances we complain of, may be traced to ourselves? Why, the very fact that the bill now under consideration was never subjected to the supervision of the Society, or any member of it, is of itself a pretty convincing proof that the accusation is just.

*To be continued.*

M. B., M.R.C.S.E.

Toronto, May 25, 1846.

#### BILL.

An Act to incorporate a College of Physicians and Surgeons in Upper Canada.

Whereas John King, M. D., President of *The Toronto Medico-Chirurgical Society*, and George R. Grasset, L. M., Secretary of the said Society, acting on behalf of the said Society, have by their Petition amongst other things, represented that the laws now in force in that part of this Province called Upper Canada, regulating the practice of the Medical Profession, and for the prevention of persons practising without License, have been found very inadequate, and have prayed that such alterations and amendments may be made in the existing laws as may be most conducive to the interests of the Medical Profession and the public at large; And whereas it is highly desirable that the Profession of Medicine in Upper Canada should be placed upon a more respectable and efficient footing, and that a more summary mode should be provided for the conviction and punishment of persons practising without a License: Be it therefore enacted, &c.

And it is hereby enacted by the authority of the same, That the Act of the Legislature of Upper Canada passed in the fifty-ninth year of the Reign of His late Majesty King George the Third, intituled, "*An Act to repeal an Act passed in the fifty-fifth year of His late Majesty's Reign, intituled, 'An Act to License Practitioners in Physic and Surgery throughout this Province, and to make further provision for Licensing such Practitioners,'*" and also the Act of the said Legislature passed in the eighth year of the Reign of His late Majesty King George the Fourth, intituled, "*An Act to amend the laws regulating the practice of Physic, Surgery and Midwifery in this Province,*" and all other Acts or parts of Acts or provisions of law inconsistent with the provisions of this Act, be and the same are hereby repealed.

II. And be it enacted, That the said John King and George R. Grasset, and the other present Members of *The Toronto Medico-Chirurgical Society* and their successors, to be nominated and appointed as hereinafter provided, shall be and they are hereby declared to be one body corporate and politic in deed and in law, by the name of *The College of Physicians and Surgeons of Upper Canada*; and shall have perpetual succession and a common seal, with power to change, alter, break or make new the same, and they and their successors by the name aforesaid, may sue and be sued; implead; and be impleaded, answer and be answered unto, in all or any Court or Courts of Record and places of Jurisdiction

\* The fourth line of the Bill as printed by the House.

within this province; and that they and their successors by the name aforesaid, shall be able and capable in law to have, hold, receive, enjoy, possess and retain for the ends and purposes of this Act, and in trust and for the benefit of the said College, all such sums of money as have been paid and given, or shall at any time hereafter be paid, given, devised or bequeathed by any person to and for the use of the said College, and that they and their successors by the name aforesaid, shall and may at any time hereafter without any license or mortmain, purchase, take, receive, have, hold, possess and enjoy any lands, tenements or hereditaments, or any estate or interest derived or arising out of any lands, tenements or hereditaments for the purposes of the said College and for no other purposes whatever; and may also in the same manner sell, grant, lease, demise, alien or dispose of the same, and do or execute all and singular the matters and things that to them shall or may appertain to do; Provided always, the said real estate shall at no time exceed in value the sum of \_\_\_\_\_ pounds of lawful money of this Province.

III. And be it enacted, That the said persons composing *The College of Physicians and Surgeons of Upper Canada*, as hereinbefore mentioned, and their successors, shall from and after the passing of this Act be called *Fellows of the College of Physicians and Surgeons of Upper Canada*.

IV. And be it enacted, That the Fellows of the said College and their successors, shall and may have power to elect in such manner, and from time to time from and out of the Members of the said College, such and so many persons who shall also be Fellows thereof as in their discretion they shall think fit.

V. And be it enacted, That the Fellows for the time being of the said College, be and they are hereby declared to be Governors of the said College; and that any four of them with the President, or in his absence the Vice-President, be a *quorum*, and shall have full power and authority to frame and make statutes, rules and ordinances for the government of the said College and of the Members thereof; and also from time to time by any new statutes, rules or ordinances, to revoke, renew, amend or alter all, every or any of the said statutes, rules and ordinances as to them shall seem meet and expedient: Provided always, that the said statutes, rules and ordinances, or any of them, shall not be repugnant to the laws and statutes of this Province in force in Upper Canada: Provided also, that as well for the election of a President and Vice-President, as for the confirmation of statutes, rules and ordinances as aforesaid, the Fellows not resident in the City of Toronto may vote by proxy.

VI. And be it enacted, That all persons now authorized by law or who may hereafter be authorized by law to practise Physic, Surgery and Midwifery within this Province and resident in Upper Canada, who shall comply with the provisions of this Act, shall be, and they are hereby declared to be Members of the said College of Physicians and Surgeons of Upper Canada, and shall be subject to such rules, regulations and by-laws, as may be adopted by the Fellows of the said College from time to time.

VII. And be it enacted, That the Fellows of the said College shall annually on the first Monday in January in each and every year (except the first election which shall take place on the second Monday in May in the year of Our Lord one thousand eight hundred and \_\_\_\_\_) elect from among themselves a President and one Vice-President, who shall preside in the absence of the President; and no statute, rule or ordinance shall have any effect or be binding upon the Fellows of the said College or the Members thereof until the same shall have been published thirty days in the *Upper Canada Gazette*.

VIII. And be it enacted, That the Fellows of the said College shall have power from time to time to appoint such and so many officers in the said College as they may think proper, and at their pleasure to remove the same.

IX. And be it enacted, That from and after the passing of this Act, it shall not be lawful for any person not being a Fellow or Member of the said College of Physicians and Surgeons of Upper Canada, or not actually employed as a Physician or Surgeon in Her Majesty's Naval or Military Service, to practise Physic, Surgery or Midwifery in Upper Canada for hire, gain or hope of reward; and any person who shall practise Physic, Surgery or Midwifery for hire, gain or hope of reward, not licensed as aforesaid, or not being actually employed as a Physician or Surgeon in Her Majesty's Naval or Military Service, shall upon conviction thereof before one Justice of the peace upon the oath of one credible witness, forfeit and pay the sum of \_\_\_\_\_; Provided that nothing in this Act contained shall be construed to prevent or prohibit any female from practising Midwifery in Upper Canada, or to require such female to take out such License as aforesaid.

X. And be it enacted, That no person now authorized to practise Physic, Surgery and Midwifery within this Province, shall be entitled to the privilege of becoming a Fellow or Member of the said College unless he shall first pay the sum of \_\_\_\_\_ to such person, and in such manner as the Fellows of the said College shall from time to time direct; nor until he shall conform to the rules and regulations which the Fellows of the said College may from time to time make respecting the mode of becoming Members of the said College.

XI. And be it enacted, That from and after the passing of this Act no person shall be admitted to practise Physic, Surgery and Midwifery, or either within Upper Canada, until he shall first obtain a License so to do under the seal of the said College of Physicians and Surgeons of Upper Canada, except he be a Fellow or Member of the said College of Physicians and Surgeons of Upper Canada, or except he has before the passing of this Act been licensed by the Governor, Lieutenant Governor or person administering the Government of this Province, or except he be actually employed as a Physician or Surgeon in Her Majesty's Naval or Military Service.

XII. And be it enacted, That upon the application of any person exhibiting a Diploma or License from any University in Her Majesty's Dominions, or from any College or Faculty of Physicians, or of Surgeons in the United Kingdom, as Physician or Surgeon, or a License to practise as such in Lower Canada, or a Commission or Warrant as Physician or Surgeon in Her Majesty's Naval or Military regular Services, and upon satisfying the said Fellows of the said College that he is the person named in such Diploma, License, Commission or Warrant, it shall and may be lawful for the Fellows of the said College to grant such applicant a License under the seal of the said College, to practise Physic, Surgery and Midwifery, or either, as the case may be, in Upper Canada.

XIII. And be it enacted, That it shall and may be lawful for any person while employed on actual Service in Her Majesty's Naval or Military Service, as Physician or Surgeon, to practise Physic, Surgery or Midwifery in Upper Canada, without a License whilst he is so employed.

XIV. And be it enacted, That the Fellows of the said College shall, from time to time, determine and direct by some statute, rule or ordinance, the amount of fees to be paid by persons applying for a License to practise Physic, Surgery and Midwifery, or either, within Upper Canada: Provided always, that the amount to be paid shall in no case exceed the sum of five pounds.

XV. And be it enacted, That when any person shall be charged on the oath of one or more credible witness or witnesses before any Justice of the Peace, with having practised Physic, Surgery, or Midwifery in Upper Canada; for hire, gain or hope of reward, without a License, (except in the case of a female practising Midwifery,) the said Justice may summon the person charged to appear at a time and place to be named in such summons, and if he shall not appear accordingly, then (upon proof of the due service of the summons upon such person by delivering the same to him perse-

nally) the Justice may either proceed to hear and determine the case *ex parte*, or issue his warrant for apprehending such person and bringing him before himself or some other Justice of the Peace, or the Justice before whom the charge shall be made, may if he shall so think fit, without any previous summons issue such warrant, and the Justice before whom the person charged shall appear or be brought shall proceed to hear and determine the case.

XVI. And be it enacted, That in default of payment of any fine imposed under the authority of this Act, together with the costs attending the same within the period specified for the payment thereof at the time of conviction by the Justice of the Peace before whom such conviction may have taken place, it shall and may be lawful for such Justice of the Peace to issue his warrant directed to any Constable, to levy the amount of such fine and costs within a certain time to be in the said warrant expressed: and in case no distress sufficient to satisfy the amount shall be found, it shall and may be lawful for him to commit the offender to the Common Gaol of the District wherein the offence was committed, for any time not exceeding one month, unless the fine and costs shall be sooner paid.

XVII. And be it enacted, That no conviction under this Act shall be quashed for want of form, and no warrant of commitment shall be held void by reason of any defect therein, provided it be alleged that the party has been convicted, and there be a good and valid conviction to sustain the same.

XVIII. And whereas, for the protection of the public it is necessary that some supervision and control should be had over persons vending Medicines, and Drugs, or otherwise acting as Apothecaries within any City or Town corporate in Upper Canada: Be it therefore enacted, That the Fellows of the said College shall and may from time to time make such rules and regulations for the government and proper management of persons acting as Apothecaries, within any City or Town corporate within Upper Canada, as they may think proper, and may impose such penalty for the breach or non-observance of the same as in their discretion they may deem expedient, not exceeding the sum of pounds for any one offence, which said penalty may be enforced and collected before any Justice of the Peace, in the same manner as hereinbefore provided for the conviction and punishment of persons practising Physic, Surgery or Midwifery without a License; which said rules and regulations, before they shall be binding or effectual for the purpose of this Act, shall be published at least thirty days in the Upper Canada Gazette.

XIX. And be it enacted, That all fines and penalties levied and collected under and by virtue of this Act, shall be paid into the hands of the proper officer appointed by the said Fellows from time to time, to and for the use and benefit of the said College.

XX. Provided always, and be it enacted, That nothing herein contained shall extend or be construed to extend, to restrain the power of the Legislature at any time to repeal, alter or modify this Act in any of its provisions.

BOOKS, &c., RECEIVED DURING THE MONTH.

The Rejected Article, in reply to Dr. S. P. White's case of tumour of the shoulder, in the May number of the New York Journal of Medicine, with introductory remarks, containing a true statement of the facts in relation to that case. By A. L. Cox, M. D., New York.

Stockton's Dental Intelligencer, Vol. ii, Nos. 5 and 7.

Boston Medical and Surgical Journal, Nos. 13, 14, 15, 16, 17.

Barker's Canadian Magazine, Vol. i, No. 1.

Dublin Medical Press, April 8, 15, 22, 29.

Provincial Medical and Surgical Journal, April 8, 15.

American Journal of Science and Arts, Vol. i, No. 3.

The Medical Examiner, Philadelphia, Nos. 14, 15, 16, 17.

The Journal of Health and Monthly Miscellany; edited by W. M. Cornell, M. D., Boston. Vol. i, Nos. 1 to 5.

The Northern Journal of Medicine, Edinburgh, Nov., Dec., Jan., and Feb. Nos.

Buffalo Medical Journal, Vol. 1, No. 12.

Southern Journal of Medicine and Pharmacy, Vol. 1, No. 1 and 3.

New York Medical and Surgical Reporter, Vol. i, No. 16.

The New Orleans Medical and Surgical Journal, Vol. 2, No. 6.

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

Illinois and I diana Medical and Surgical Journal, Chicago, Illinois, Vol. i, No. 1.

Illustrated Botany; edited by John B. Newman, M. D., New York, Vol. i, Nos. 1, 2 and 3.

New York Journal of Medicine and the Collateral Sciences, May.

The Missouri Medical and Surgical Journal, Vol. i, No. 12.

REPORT OF THE MONTREAL GENERAL HOSPITAL FOR MARCH AND APRIL, 1846.

Dr. CRAWFORD, } Attending Medical Officers.  
Dr. SEWELL, }

DISEASES AND ACCIDENTS.

Abscessus, . . . . .	2	Hypochondrasis, . . . . .	1
Amebustio, . . . . .	1	Icterus, . . . . .	2
Amemorrhœa, . . . . .	2	Iritis, . . . . .	1
Acne Rosacea, . . . . .	1	Lupus, . . . . .	1
Accouchment, . . . . .	1	Morbus Cordis, . . . . .	3
Ascites, . . . . .	3	Neuralgia, . . . . .	1
Bronchitis, . . . . .	4	Œdema, . . . . .	3
Catarthitis Senilis, . . . . .	1	Ophthalmia, . . . . .	4
Vesicæ, . . . . .	1	Orchitis, . . . . .	1
Caries Spinalis, . . . . .	1	Paralysis, . . . . .	1
Os Nasi, . . . . .	1	Pernio, . . . . .	1
Compressio Cerebri, . . . . .	1	Pleththis, . . . . .	6
Conjunctivitis, . . . . .	3	Plethora Cerebri, . . . . .	1
Contusio, . . . . .	5	Pleurodynia, . . . . .	1
Delirium Tremens, . . . . .	1	Pneumonia, . . . . .	3
Diarrhœa, . . . . .	1	Psoriasis, . . . . .	2
Dyspepsia, . . . . .	4	Rheumatismus, . . . . .	9
Dysenteria, . . . . .	1	Rubeola, . . . . .	3
Dysuria, . . . . .	1	Scarlatina Anginosa, . . . . .	6
Eczema, . . . . .	2	Scirrhus, . . . . .	1
Erysipelas, . . . . .	1	Sciatica, . . . . .	1
Febris Com. Con., . . . . .	13	Scrofula, . . . . .	2
Typhoides, . . . . .	8	Subluxatio, . . . . .	1
Intermittens, . . . . .	3	Syphilis, . . . . .	3
Fractura, . . . . .	2	Syehosis, . . . . .	1
Gelatio, . . . . .	2	Tumor, . . . . .	1
Gastrodynia, . . . . .	1	Uleus, . . . . .	4
Hæmatemesis, . . . . .	1	Urticaria, . . . . .	1
Hypertrophia Cordis, . . . . .	2	Variola, . . . . .	3
Hepatitis, . . . . .	1	Varix, . . . . .	1
Hysteria, . . . . .	1	Vermisatio, . . . . .	1
		Total, . . . . .	140
Remained, . . . . .	104	Discharged, . . . . .	161
Admitted, . . . . .	142	Irregular, . . . . .	2
		Died, . . . . .	82
Total treated, . . . . .	246	Remaining, . . . . .	72
		Total, . . . . .	246

IN-DOOR PATIENTS TREATED.

Belonging to Montreal, . . . . .	125
Immigrants, . . . . .	14
Seamen, . . . . .	1
Soldiers, . . . . .	2
Total, . . . . .	142
Males, . . . . .	96
Females, . . . . .	46
Total, . . . . .	142

OUT-DOOR PATIENTS TREATED.

Belonging to Montreal, . . . . .	440
Immigrants, . . . . .	29
Total, . . . . .	469
Males, . . . . .	240
Females, . . . . .	229
Total, . . . . .	469

ALEXANDER LONG, M.D., House Surgeon

MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.—APRIL, 1846.  
 Latitude 43° 39'.4" N. Longitude 79° 21'.5" W. Elevation above Lake Ontario, 108 Feet.

DAY	Barometer at Temp. of 32°			Tension of Vapour.			Temperature of the Air.			Humidity of the Air.			Wind.			WEATHER.	Rain in In. on surf.		
	7 A.M.	10 P.M.	Mean.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.	7 A.M.	3 P.M.	10 P.M.				
	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.	Mean.				
1	30.156	30.117	30.1387	1.50	1.36	1.22	1.84	31.50	41.70	28.80	34.18	.84	.52	69	Calm.	—	—	Clear and unclouded. Very fine.	
2	30.163	30.112	30.1375	1.36	1.25	1.34	1.32	33.4	42.3	29.4	34.68	.71	.47	.82	N.E.	—	—	Clear and unclouded. Very fine.	
3	30.166	30.123	30.1449	1.43	1.08	1.32	1.32	35.6	45.5	34.0	37.84	.63	.36	.68	E. by N.	—	—	Clear and unclouded. Very fine.	
4	30.085	30.051	29.987	1.46	1.84	1.71	2.02	38.4	49.0	41.9	44.55	.69	.54	.65	E.N.E.	—	—	Clear and unclouded. Very fine.	
5	30.018	29.948	29.983	2.10	2.09	—	—	50.1	52.9	—	45.55	.59	.54	.65	E.N.E.	—	—	Clear and unclouded. Very fine.	
6	30.070	30.090	29.943	2.13	2.76	2.86	2.63	41.3	50.6	47.0	46.85	.83	.77	.90	E. by S.	—	—	Clear and unclouded. Very fine.	
7	29.792	29.549	29.583	2.91	2.96	2.94	2.56	46.2	54.6	48.2	48.07	.81	.71	.77	S.S.W.	—	—	Clear and unclouded. Very fine.	
8	29.884	29.855	29.968	2.91	1.14	1.08	1.05	1.12	34.4	42.3	31.8	34.79	.57	.33	.58	W. by S.	—	—	Clear and unclouded. Very fine.
9	29.076	29.913	29.800	2.97	1.59	1.33	1.61	33.4	48.1	35.2	39.98	.74	.47	.65	E.S.E.	—	—	Clear and unclouded. Very fine.	
10	29.778	29.667	—	1.58	2.05	—	—	38.8	42.7	—	39.98	.67	.75	.66	E.S.E.	—	—	Clear and unclouded. Very fine.	
11	29.169	29.307	29.527	2.24	1.60	1.42	1.86	38.6	45.8	35.4	39.31	.96	.53	.69	W. fresh.	—	—	Clear and unclouded. Very fine.	
12	29.397	29.293	—	1.63	1.89	—	—	32.0	35.4	—	39.31	.96	.53	.69	W. fresh.	—	—	Clear and unclouded. Very fine.	
13	29.353	29.491	29.636	2.9	2.55	—	—	32.0	35.4	—	39.31	.96	.53	.69	W. fresh.	—	—	Clear and unclouded. Very fine.	
14	29.650	29.514	29.488	2.97	1.53	1.96	1.71	34.0	44.7	35.4	37.51	.85	.52	.95	N.W. by S.	—	—	Clear and unclouded. Very fine.	
15	29.555	29.931	29.977	2.9	2.55	—	—	32.0	35.4	—	39.31	.96	.53	.69	N.W. by S.	—	—	Clear and unclouded. Very fine.	
16	29.387	29.816	29.786	2.9	2.55	—	—	32.0	35.4	—	39.31	.96	.53	.69	N.W. by S.	—	—	Clear and unclouded. Very fine.	
17	29.720	29.604	29.541	2.9	2.55	—	—	32.0	35.4	—	39.31	.96	.53	.69	N.W. by S.	—	—	Clear and unclouded. Very fine.	
18	29.645	29.558	29.555	2.9	2.55	—	—	32.0	35.4	—	39.31	.96	.53	.69	N.W. by S.	—	—	Clear and unclouded. Very fine.	
19	29.822	29.937	—	1.62	2.03	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
20	30.005	29.804	29.738	2.9	2.55	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
21	29.876	29.851	29.735	2.9	2.55	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
22	29.650	29.710	29.656	2.9	2.55	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
23	29.650	29.565	29.471	2.9	2.55	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
24	29.400	29.352	29.442	2.9	2.55	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
25	29.582	29.608	29.589	2.9	2.55	—	—	40.6	55.0	—	47.05	.66	.71	.83	N.W.	—	—	Clear and unclouded. Very fine.	
26	29.594	29.588	—	1.44	1.63	—	—	48.5	49.2	—	42.47	.67	.55	.60	E.N.E.	—	—	Clear and unclouded. Very fine.	
27	29.656	29.593	29.562	2.9	2.55	—	—	48.5	49.2	—	42.47	.67	.55	.60	E.N.E.	—	—	Clear and unclouded. Very fine.	
28	29.543	29.395	29.357	2.9	2.55	—	—	48.5	49.2	—	42.47	.67	.55	.60	E.N.E.	—	—	Clear and unclouded. Very fine.	
29	29.295	29.277	29.263	2.9	2.55	—	—	48.5	49.2	—	42.47	.67	.55	.60	E.N.E.	—	—	Clear and unclouded. Very fine.	
30	29.290	29.286	29.317	2.9	2.55	—	—	48.5	49.2	—	42.47	.67	.55	.60	E.N.E.	—	—	Clear and unclouded. Very fine.	
Mean	29.7470	29.6876	29.7016	.203	.224	.208	.214	41.41	50.52	41.40	44.11	.77	.60	.73	1.300*	—	—	Temperature for April.	

Temperature for April.  
 Year. M. an. Max. Min. Range.  
 1840. 42.70 68.70 22.80 45.90  
 1841. 39.4 61.8 19.9 41.9  
 1842. 43.1 89.8 20.1 69.7  
 1843. 41.29 71.6 14.7 26.9  
 1844. 49.11 74.8 14.9 25.7  
 1845. 42.13 66.7 16.5 24.2  
 1846. 44.11 91.8 21.2 57.6

Proportion of Wind from each Quarter—  
 N.W. 74 Winds, 408  
 S.W. 89 Calms, 190  
 E. 122  
 S.E. 133  
 Total, 538

Proportion of Calm, .. .. .  
 Proportion of the Barometric pressure due to its presence, .. .. .

\* 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 an Inch of Mercury, at the existing temperature, saturation being represented by 1.00.  
 † Under the head of Humidity of the Air, is given the proportion the Aqueous Vapour bears to the quantity the air is capable of containing at the existing temperature, saturation being represented by 1.00.  
 ‡ The quantity of Rain or Snow received each 24 hours, is noted at 9 a.m., and is marked in inches.  
 § The Observation entered in the column for 7 a.m., on Sundays, is actually taken at 9 a.m. The two Observations taken on Sunday are not included in any of the means.



**BILL OF MORTALITY for the CITY of MONTREAL, for the month ending APRIL 30, 1846.**

DISEASES	Male.	Female.	Total.	AGE														
				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, .....	9	4	13	1	8	.	2	2	.	.	.	.	.	.	.	.	.
	Scarlatina, .....	3	2	5	.	2	2	1	1	1	.	.	.	.	.	.	.	.
	Hooping Cough, .....	3	2	5	3	2	.	.	.	.	.	.	.	.	.	.	.	.
	Fever, .....	17	14	31	12	11	1	4	1	.	.	.	.	1	2	.	.	.
DISEASES OF BRAIN AND NERVOUS SYSTEM.....	Apoplexy, .....	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.
	Convulsions, .....	3	4	7	6	1	.	.	.	.	.	.	.	.	.	.	.	.
	Delirium Tremens, .....	1	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.
	Dentition, .....	2	2	4	2	2	.	.	.	.	.	.	.	.	.	.	.	.
	Hydræcephalus, .....	.	2	2	1	1	.	.	.	.	.	.	.	.	.	.	.	.
DISEASES OF THE THORACIC VISCERA,	Consumption, .....	12	23	35	9	5	.	1	.	5	3	6	4	2	.	.	.	
	Croup, .....	1	3	4	3	1	.	.	.	.	.	.	.	.	.	.	.	
	Asthma, .....	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	
DISEASES OF ABDOMINAL VISCERA,	Dropsy, .....	5	.	5	.	.	.	.	1	1	.	1	1	1	.	.	.	
	Inflammation, .....	8	5	13	3	1	1	1	2	3	.	.	.	.	.	.	2	
OTHER DISEASES, AND DISEASES NOT SPECIALLY DESIGNATED,.....	Still-born, .....	4	2	6	6	.	.	.	.	.	.	.	.	.	.	.	.	
	Debility, .....	2	9	11	.	.	.	.	.	.	.	.	.	.	.	.	5	
	Unknown, .....	5	2	7	1	.	.	.	.	2	2	.	2	1	.	.	.	
	Sudden & Accid'tal	2	1	3	.	.	.	.	1	.	.	1	.	1	.	.	.	
	Total, .....	79	75	154	47	33	3	10	6	10	8	10	11	11	11	6	.	.

**MONTHLY METEOROLOGICAL REGISTER AT MONTREAL FOR APRIL, 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,	+30	+50	+30	+40.	30.44	30.46	30.49	30.46	W.	N. W.	N. W.	Fair	Fair	Fair
2,	" 29	" 42	" 30	" 35.5	30.55	30.52	30.48	30.52	N. W.	N. W.	N. W.	Fair	Fair	Fair
3,	" 30	" 49	" 35	" 39.5	30.56	30.54	30.52	30.54	N. W.	N. W.	N. W. by N.	Fair	Fair	Fair
4,	" 29	" 58	" 38	" 48.5	30.60	30.56	30.47	30.54	N. W. by N.	N. W. by N.	N. W.	Fair	Fair	Fair
5,	" 36	" 63	" 53	" 48.5	30.50	30.34	30.34	30.39	N. W.	N. W.	S. S. W.	Fair	Fair	Fair
6,	" 49	" 66	" 44	" 49.5	30.50	30.48	30.44	30.44	W.	W.	N. W.	Fair	Fair	Fair
7,	" 40	" 69	" 57	" 57.5	30.30	30.18	29.92	30.13	N. W.	S.	S.	Fair	Fair	Fair
8,	" 44	" 47	" 34	" 54.5	29.99	30.00	30.23	30.07	W.	W.	W. by S.	Rain	Fair	Fair
9,	" 29	" 58	" 49	" 43.5	30.43	30.36	30.25	30.35	W.	W. by S.	W. by S.	Fair	Fair	Fair
10,	" 39	" 55	" 43	" 47.	30.20	30.12	29.96	30.09	W.	W.	W.	Fair	Fair	Fair
11,	" 41	" 52	" 38	" 46.5	29.65	29.61	29.66	29.64	N. by W.	N. by W.	N. W.	Cloudy	Rain	Rain
12,	" 33	" 37	" 29	" 35.	29.74	29.65	29.60	29.66	N. W. by W.	N. W. by W.	N. W. by W.	Fair	Snow	Cloudy
13,	" 28	" 39	" 30	" 33.5	29.60	29.64	29.75	29.66	N. W. by W.	N. W.	N. W.	Fair	Snow	Fair
14,	" 27	" 40	" 36	" 33.5	29.92	29.88	29.80	29.87	N. W.	N. W.	W. N. W.	Fair	Fair	Fair
15,	" 30	" 46	" 32	" 38.	29.84	30.00	30.30	30.05	N. by W.	N. W.	N. W.	Snow	Fair	Fair
16,	" 34	" 54	" 39	" 44.	30.38	30.28	30.17	30.28	N. W.	S. W.	S. W.	Fair	Fair	Fair
17,	" 44	" 61	" 47	" 52.5	30.13	30.09	30.03	30.08	S. W.	S. W.	S. W.	Fair	Fair	Fair
18,	" 55	" 66	" 50	" 60.5	29.92	29.90	29.88	29.90	S. W.	W.	W.	Fair	Fair	Fair
19,	" 48	" 62	" 42	" 55.	29.90	29.99	30.28	30.06	W.	N. W. by W.	N. W.	Fair	Fair	Fair
20,	" 39	" 63	" 52	" 51.	30.34	30.26	30.00	30.20	N. W.	N. W.	N. W.	Fair	Fair	Rain
21,	" 42	" 49	" 43	" 45.5	29.95	30.01	30.10	30.02	W.	N. W.	N. W.	Fair	Rain	Cloudy
22,	" 37	" 61	" 53	" 49.	30.16	30.11	29.96	30.08	W.	S. W.	S. W.	Fair	Fair	Cloudy
23,	" 47	" 62	" 51	" 54.5	30.07	29.95	29.88	29.98	W.	N. W. by W.	N. W. by W.	Fair	Fair	Fair
24,	" 50	" 60	" 48	" 55.	29.77	29.83	29.98	29.86	W.	W. by S.	W. by S.	Fair	Fair	Fair
25,	" 31	" 52	" 47	" 41.5	30.10	30.08	30.05	30.08	S. E. by E.	S. E. by E.	S. E. by E.	Fair	Fair	Fair
26,	" 37	" 64	" 52	" 50.5	30.02	29.88	29.88	29.93	S. E. by E.	E. N. E.	N. E.	Fair	Fair	Fair
27,	" 45	" 69	" 54	" 57.	29.94	29.94	29.92	29.93	N. E.	E. N. E.	S. E.	Fair	Fair	Fair
28,	" 47	" 71	" 56	" 59.	30.03	29.96	29.91	29.97	E.	E.	E.	Fair	Fair	Fair
29,	" 48	" 70	" 54	" 59.	29.90	29.87	29.82	29.86	E.	E.	E.	Fair	Fair	Fair
30,	" 55	" 61	" 52	" 58.	29.77	29.72	29.68	29.72	S.	S.	S. by W.	Cloudy	Rain	Rain

THERM. } Max. Temp., +71° on the 28th.  
 } Min. " +27° " 14th.  
 Mean of the Month, +48° 1.

BAROMETER: } Maximum, 30.60 Inches on the 4th.  
 } Minimum, 29.60 " 13th.  
 Mean of Month, 30.08 Inches.