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THE
BRITISH AMERICAN JOURNAL.

ORIGINAL COMMUNICATIONS.

ART. LVII.—*Cases of Cyclopic Malformation.* By ARCHIBALD HALL, M.D., L.R.C.S.E., Professor of Midwifery, &c., University of McGill College.

Perhaps of the various kinds of monstrosity which are met with in the practice of Midwifery, that of the Cyclopean is probably one of the rarest, and however much the labours of Geoffry St. Hilaire, Vrolik, Vering, Meckel, Osiander, Valentin, Muller, Bischoff, &c., &c., may have conspired to clear up the manner in which monstrosities in general have originated, it must be acknowledged that the whole subject of Teratology is far from being in that settled condition in which we should like to see it, and that it is a subject which would well reward the cultivation of any enquirer. As far as yet observed I believe that the Cyclopean malformation is attended with a displacement, or most commonly absence of the nose, and Tieddemann imagined that the latter was due to a complete absence of the olfactory nerves, with a subsequent fusion of the optic nerves, or optic thalami. There can be no doubt that this observer was wrong in regard to the malformation in all the cases which have been noticed, however much in those which he saw he might have detected a negation of those nerves. Vrolik states that he had detected olfactory nerves in the dissection of Cyclopean infants. In fact Tieddemann has gone so far as to state that in all the congenital malformations of the nose, lips, and palate, resulting in the absence of the nose, with harelip extending through the palate, he has detected the absence of the olfactory nerve, and the inference is therefore permissible that these affections are due to the absence of this nerve, a position utterly unmaintainable, and contradicted by fact. One good result however has followed investigation into this curious subject, and this is the refutation of all the old and crude ideas entertained on this subject by the ancients, some of which are still held by enlightened persons, and of this kind I would especially mention the influence of maternal mental impressions. On this subject a great deal could be said both for and against the doctrine.

With these few general observations, I take the liberty of quoting the follow-

ing interesting case of Cyclopean malformation from the pen of Dr. Adino B. Hall, of Boston, which was read before the Suffolk District Medical Society, and subsequently appeared in the Boston Medical and Surgical Journal, October 31st, 1861.

The following singular case of congenital malformation came under my observation on the sixth of this month.

At six o'clock in the morning, I saw Mrs. M., in her sixth labour. At eight o'clock, the evening previous, her pains commenced, and continued during the night, with more or less intensity. About twenty minutes before seeing the patient, the membranes ruptured, and a very large quantity of liquor amnii escaped, after which the uterine contractions wholly ceased.

Upon examination, I found the left foot presenting; and after waiting some twenty or thirty minutes without any recurrence of the uterine pains, a drachm and a half of ergot, in decoction, was administered. The contractile powers of the uterus soon returned expelling the lower extremities and body. At this stage, there was no pulsation of the cord. It was with some difficulty that the head was delivered, owing to its large size and the feeble contractions of the womb. The child, a female, was still, much to the gratification of all present, from its peculiar organisation.

The following is a brief description of this anomalous birth. The whole contour of the head presented a striking appearance. The forehead was high and prominent, and slightly projecting. The head measured 14 inches in circumference, $9\frac{1}{2}$ inches from the tip of the right ear to that of the left, and 10 inches from the superciliary ridges to the occipital protuberance; thus giving the transverse and antero-posterior diameters nearly the same as the vertical. The head was well covered with hair, and the cranial bones so fully developed that there were no open spaces, or fontanelles of any account.

The nose was entirely wanting, there being no nasal bones or fibro-cartilages. From the mouth upward, the space was covered with normal skin and integument, with no rough, bony or cartilaginous points felt beneath. In the centre, between the orbital spaces, where the base of the nose should commence, was an elliptical opening, about the size and shape of the open eye of an adult. At the two angles of this optical space, the upper and lower lids had become well organized, for more than the third of an inch, along the elliptical lines, and were covered with the usual triple row of hairs. These were short and soft, giving the appearance quite normal, as *eyelashes*. The remaining portions of skin along these lines presented everted edges, evidently showing an attempt to form regular lids for the whole contour of the ellipsis.

At the base of this open space, adipose and muscular tissue were observed. Upon the right and left, were the usual orbital depressions. These were covered with smooth dermoid integument, but were not so deep as they would appear in a child whose globes had been extirpated, nor were the outlines of the socket so prominent. From each canthus of the central opening, were two short linear indentations, extending outwardly in a transverse direction, across the orbital spaces.

The superciliary ridges were not very much elevated, still they were well marked; neither were they covered with the usual normal growth of hair.

The absence of both eyes and their appendages gave a most unique appearance; and it seemed as if Nature had forgotten the formation of the orbits and their contents, and to have extended over the spaces the skin and its integuments. Three-fourths of an inch above the cyclopiian eye, just over the nasal tuberosity, was an outgrowth, an inch and a quarter in length, and five-eighths of an inch in diameter, each way, at the base; while at the apex it was somewhat less, and had a flattened appearance. At the end of the appendage was a small indenture, about the size of a pea. At the base its structure was in part cartilaginous, while the remaining portion was of integument peculiar to the dermis and cellular tissue. The whole resembled somewhat the index finger, devoid of the nail and the second and third phalanx.

The child, in other respects, was well developed externally. It weighed six and three-fourths pounds. No examination was made of the internal organs.

The movements of the foetus *in utero* had been vigorous during the night, and up to the time I saw the patient. On making gentle traction on the presenting foot, motion was felt three or four times; and the mother, although assured to the contrary, believed the birth would be a living one.

I would say, in addition, as a historical point, that the mother is thirty-eight years old, and has always possessed good health. She has had five previous labours within the last eight years, giving birth to three living boys and two girls. One labour was instrumental. During the last six months, she has experienced much anxiety and depression of mind, from family connections, &c. She also states that on the second of February, when about two months pregnant, she saw two boys in the street exercising their pugilistic powers. One of the combatants had a bloody face, and some blood was observed on the sidewalk. She separated the parties, and accompanied one of them to his home, where she saw another boy sick in bed with a bandage around his head. Otherwise, there has been nothing remarkable during these period of gestation.

As somewhat similar to the preceding case, I take the opportunity of communicating the following singular instance of malformation which occurred in my own practice during the month of March last :

On the 4th March last I was requested to visit a Mrs. W., residing in Wellington Street, whom I found laboring under a sharp attack of bronchitis. At this time she was about eight months gone in the state of pregnancy. She was under my attendance for this complaint until Sunday the 24th of the same month, when about 1 p.m., I was summoned hurriedly from my house by her husband to visit her. I found that she had been in labour since the preceding midnight, and on examination discovered the os uteri well dilated, the membranes ruptured, an event which had induced her about an hour previously to send for me, but as to the nature of the presenting part I could form no definite idea. Having been suddenly called away from home, and not suspecting it to be a case of accouchement, I left unprovided with chloroform, ergot or the usual adjuvants in such cases. Finding the labour pains strong, urgent, and bearing down, and unable to determine the presenting part, I rade up my mind to turn the child, and for that purpose despatched the husband for some chloroform to the nearest apothecary. While he was gone the pains became more violent, and in less than five minutes the child was born. It breathed for about three minutes, although it did not cry. But it presented the following peculiarities, which I noticed at the time, and which made those immediately connected with it thankful that its life was not longer prolonged.

The head was anencephalic and proved the presenting part. Where the orbits of the eyes should have been, were two *extremely prominent* and *turgid* eyelids as it were, or separating which nothing was found beneath but two slits. The eyelids, if such, were adherent together, and the depth within the orbits at which the slits, (if I may call them such) were found, was such as to preclude the idea that they were in advance of eyeballs, or covered any such organs. There were neither eyelashes, nor eyebrows. At the inner part of each ostensible intended eye, and occupying the place of the base of the nose, an organ entirely wanting, was a round opening about $\frac{1}{2}$ inch in diameter containing no vestige of eye whatever, and leading from this opening

was another of a linear shape which communicated with the upper lip, which presented every characteristic of harelip. On a minute examination the fissure constituting this harelip, extended through the palate bone and soft parts beyond.

Beyond these abnormalities there was nothing else peculiar in the case. In every other respect the newly born monstrosity was perfectly formed. Not without some objections I got it weighed. It was found to weigh 6 lb, 11 oz. I could neither succeed in obtaining permission from its father to get possession of the child, nor to perform an anatomical examination, circumstances which I have much regretted.

I am aware that this case can scarcely be deemed one of cyclopean malformation, but unless under this head I do not know under what division of monstrosities to place it. We have only to carry out the idea which defines a Cyclopean eye to be the fusion of two eyes into one a little further, the arrest of development preventing the formation of an eye at all, and the peculiarities of this case are met.

The accouchement above alluded to was the third of this party. The first was a perfectly normal one in every respect. In the second accouchement she was attended by the late Dr. Holmes, who, from some peculiarity, was compelled to use the forceps. I was informed by a friend who was afterwards in attendance upon her during the lying in, that this second child was also a case of monstrosity, but what the peculiarities of the malformation were, I could not learn, as the friend alluded to was unable to inform me, and the husband was utterly unwilling to converse upon, must less even allude to the subject, even although pressed by me.

I have only finally to remark, that in physical appearance, the husband is a model of his kind, and quite a young man, scarcely exceeding 32 years, and his wife is a rather good looking young woman, and with the exception of the bronchitic attack alluded to, and which lasted for about three weeks after her accouchement, had always enjoyed most excellent health. In fact, I do not know a husband and wife in this city, who from appearances I should say were more likely to procreate children of normal organization, yet twice out of three times has this wife brought forth a monster.

Montreal, Nov. 2nd, 1861.

ART. LVIII.—*On the formation of a Medical Benevolent Society, or an Annuity Fund.* By CHARLES SMALLWOOD, M.D., L.L.D. one of the Governors of the College of Physicians and Surgeons of Lower Canada.

It was gratifying to me to see in the October number of the *British American Journal* the wise and just remarks of our respected and worthy colleague, Dr. VonIffland, "On the prospect of an Annuity Fund."

As the proposer of such a measure at the session of the College to which Dr. VonIffland refers, I may feel justly proud that such a resolution should coincide with the views of one of the most philanthropic and benevolent members of our profession, who, combined with the active duties of his profession for a period of 40 years, possesses a full knowledge of the *means* and *ways* of the widows and orphans of our individual members, when their support and protection have

been suddenly removed by death, and that frequently with a noble self-sacrifice during the *raging fever* or the *dire pestilence*.

The time is now fast approaching when a plan of action must be submitted for the approval of the profession, and it is with no small feeling of the responsibility that I may be called upon in furtherance of the proposed measure to suggest or mature some means of acquiring the end in view, but I trust that during the interval of the Triennial Meeting the subject may be freely discussed through the means of the *Journal*, so that immediate action may then be taken thereon, "that we may, with combined energy and zeal, be ready to assist in securing to our brethren a refuge in need."

The importance of such a measure demands but little to be said in its favour, after the feeling and truthful appeal already made by the writer in the article referred to. It is the ways and means of action that require to be brought out, and it behoves all and every member of the profession at once to be up and doing, while many of us are enjoying life, health, and prosperity. But let us reflect what would be the position of our families, were death now to remove us, and to enquire what really is the position of some of the widows and orphans of many a noble brother who has toiled single-handed with disease, through midnight rides of dreary rain and snow-storms, administering alike at the downy pillow of the rich and at the lowly couch of the poor, to the relief of suffering, and for the health and happiness of others.

I, for one, shall be glad to see the subject brought publicly *in detail* before the profession, so that any suggestion may be well and duly weighed and the end thereby accomplished, so that the voice of the widow and orphan may hereafter bless the institution that offers to them a fostering hand, when their only earthly succour, comfort, and support lie mouldering in the dust.

St. Martin, Isle Jesus, Nov. 1, 1861.

ART. LIX.—*The Medical Statistics of the City of Montreal.* By GEORGE E. FENWICK, M.D., Physician to the Montreal Dispensary and Infirmary for Diseases of Women and Children.

Continued from page 442.

Dentition.—Under this heading we find a return of 124 deaths, of whom 122 were under two years of age. This is an unusually large proportion of deaths from this cause: the probability is that many of the cases are improperly classified. Death, the result of irritation during dentition, is by no means so common as is imagined. This process is sometimes attended with much fever, general inability, great thirst, the gums often hot and swollen, the head hot, with apparent determination to the encephalon, broken slumbers, restlessness, the child awakens in a state of alarm or in a fit of crying. There is always more or less derangement of the chylo-poitetic viscera. These symptoms, often in themselves greatly modified, may be converted into serious disease, if not endanger the lives of the little patients, by neglect or improper treatment on the part of nurses, it is too common a custom to give an infant food every time it cries, the stomach becomes thereby overloaded, and the digestive process interfered with. Another most pernicious practice, but one which I am happy to say is daily

becoming more rare, is the custom of favouring the determination of the circulation to the brain, by covering the head with warm caps while in-doors and when asleep. Connected with this disease is the next I will refer to—

Infantile Cholera.—28 cases of death are recorded from this cause, all being from the returns of the Mount Royal Cemetery, no case occurring or rather being returned as such from amongst Roman Catholics. This fact cannot fail to strike the reader, more forcibly, perhaps, if on reference to these tables he finds 30 cases of deaths registered as from teething occurring during the month of July, and 20 in August from the same cause. We have the evidence of Dewees and other eminent writers that this disease is one of the most fatal afflictions of children in the large towns of the United States, and I think the same may be said of Canada. Infantile cholera, as a general rule, is met with in all ill-ventilated localities, and is favoured by over-crowding in low and marshy districts, where drainage is imperfect, or altogether wanting. The months of June, July, and August appear to be most favourable to its development. There is no doubt of its originating in an atmosphere loaded with putrescent or mephitic effluvia. This is borne out by the fact of its more frequent occurrence in the children of the poor, or amongst those exposed to these influences, by its occurrence at the season of the year above specified, when from the high rate of temperature noxious vapours arise from decomposing vegetable or animal matter, by its appearance at the same time with cholera of adults, and by its being frequently accompanied with fever of remittent type. Another common cause of this disease is premature weaning; errors in diet, and improper clothing. Of the 28 cases of death reported, 14 occurred in the St. Antoine and St. Ann's wards.

Under the heading *Inflammation* there are recorded 24 deaths. What disease or form of inflammation this is intended to imply, I am at a loss to conjecture.

Charbon or Malignant Pustule.—This disease, of epizootic origin, and of comparatively rare occurrence proved fatal in two instances. One of the above cases fell under my own observation. It occurred in a man of over eighty years of age; he traced the attack to having assisted in skinning a cow which had died in the neighbourhood. I have seen several cases of this disease, but this was certainly the most severe I had ever met with, probably from its having run on without treatment of any kind. There was situated on the dorsum of the hand a black slough of about the size of a shilling; the hand and arm was enormously swollen and discoloured as high as the shoulder and stretching on to the chest and back; the whole of the skin affected had a peculiar hard brawny feel; the hand and forearm were covered with vesicles of variable size, containing a bloody serum. He complained of very little pain; so little indeed had he suffered, that he had worked in the fields till late the evening previous to my visit. He complained of feeling faint, but this he attributed to having spent a restless night. There was very little constitutional disturbance for the amount of disease existing. I saw him for the first time a few hours before death; from the time I saw him he sank rapidly, retaining his consciousness to the end.

The last disease, if it deserves that designation, which I shall notice is *Infantile Debility*. Under this heading 35 cases are recorded as occurring among Protestants, and no less than 1344 are from the Roman Catholic returns: o

these 442 are children from the Grey Nuns' Foundling Hospital. A large proportion of the balance would come under the heading of Still-Born or Dead-Born, in the Protestant Cemetery, but owing to religious scruples, I believe the Roman Catholics do not inter those who die without the sacrament of baptism in consecrated ground, hence all the children of this class are returned under the heading "Ondoyés ou baptisés sur-le-champ," instead of still-born.

I cannot conclude this portion of the subject under discussion without a reference to the suggestions thrown out at the commencement of this paper. I have endeavoured to lay before the reader the most prominent defects in the returns from whence the accompanying tables have been compiled, and in doing so my desire is to draw public attention to this all important subject, that measures may be taken to guard against errors in future. The great need of establishing immediate sanitary regulations cannot be questioned, and to arrive at reliable information in our mortuary tables stringent bye-laws should be enacted and enforced, compelling a correct return as to the cause of each individual case of death. This object can only be secured by obliging the keepers of cemeteries to refuse interment, unless the particulars of the fatal illness are correctly stated. In cases where a physician has been called in, his certificate should be required. The sooner this change is effected the sooner will the statistics of our city be reliable and of general benefit, and we will not stand alone, of all the large cities of this continent, as the one in which the well-being of its inhabitants in this particular at least, have been neglected. Although this paper appears in the pages of a periodical devoted to the advancement of medical and physical science, yet these remarks are intended for the public eye, and I trust if the suggestions here offered are deemed of as great importance as their nature deserves, that they will ere long be acted on, and an endeavour be made to remedy the defects which exist.

Again referring to the tables, it will be observed that the greatest proportion of deaths takes place in infants under two years of age; this fact is borne out by professional experience. The proportion of deaths of infants under two years of age bears a ratio to all deaths of about one in 2.73, equal to about 36.55 per cent. In this calculation I have omitted the still-born and all those registered as having died under one month; were these added it would give a ratio of one in 1.76 or equal to 56.60 per cent. The ratio of the mortality of children under 8 years of age is equal to one in 1.45, or 68.76 per cent. Between the ages of 8 and 15, the ratio falls off surprisingly, giving only a percentage of about 2.20. The next period of five years, or between the ages of 15 and 20, bears a ratio of deaths equal to 173 per cent. The ratio of deaths rise in the next decennial period; each succeeding period thereafter is characterised by a general diminution.

In calculating the expectation of life of the inhabitants of any district it is usual to draw comparisons between the actual population, the ratio of deaths at different periods, and a given number of births. When the births and deaths are equal, the rate of the annual mortality will express the expectation of life, or the average age of deaths. According to Dr. Price, in order to arrive at a true approximative estimate, in the absence of more correct data, we are to divide the actual population by a mean between the proportion of deaths and births.

Mr. Shattuck has proposed a method whereby he obtains the average longevity, by ascertaining the proportion of all deaths that occur at specified periods of life.

Table showing the percentage of deaths at specified ages as compared with the entire death rate :

Under one month.....	636 less 241	equal to	12.45 per cent.
“ two years	1160	equal to	36.55 “
From 2 to 8 “	386	equal to	12.165 “
“ 8 to 15 “	70	equal to	2.20 “
“ 15 to 20 “	55	equal to	1.73 “
“ 20 to 30 “	179	equal to	5.641 “
“ 30 to 40 “	175	equal to	5.515 “
“ 40 to 50 “	128	equal to	4.034 “
“ 50 to 60 “	172	equal to	4 “
“ 60 to 70 “	112	equal to	3.53 “
Over 70 “	133	equal to	4.19 “
Ages not known	12	equal to	37 “

The following table calculated from the above exhibits the proportion of 100 persons who survive at specified ages. In these tables I have made an allowance of 241 from those under one month, under which heading are included all still-born, as it would be hardly fair to admit them into these calculations.

At birth	100
Surviving under 1 month.....	87.55
“ “ 2 years.....	51.00
“ From 2 to 8 years	38.835
“ “ 8 to 15 “	36.635
“ “ 15 to 20 “	34.905
“ “ 20 to 30 “	29.264
“ “ 30 to 40 “	23.749
“ “ 40 to 50 “	19.715
“ “ 50 to 60 “	15.715
“ “ 60 to 70 “	12.185
“ Over 70 “	7.995

The average duration of life estimated from these tables is 24.136 years, which is by no means unfavorable.

Mortality in Wards.—Taking as a standard the census return recently published, it will be found that the average mortality of all wards as compared to the number of inhabitants, is about one death to every 40.43 inhabitants. The following table will show the ratio of the mortality of the several wards as compared with the population as taken by order of the Census Commissioners in the month of January last.

Table showing the ratio of mortality in wards, as compared with the number of inhabitants, from the Census recently taken.

	Deaths.	Returns of Census.	Equal to
Centre Ward.....	144	1425	1 death in 9.89
West.....	33	1837	1 55.66
East.....	60	4715	1 78.58
St. Antoine.....	469	17017	1 36.28
St. Ann's.....	399	16307	1 40.87
St. Lawrence.....	293	11628	1 39.70
St. Louis.....	367	13379	1 36.35
St. James.....	349	12016	1 34.43
St. Mary.....	291	9347	1 32.12

It will be observed that the ratio of deaths in the Centre ward is exceedingly high; this may be accounted for from its being the smallest ward as to population in the whole city, and also from the existence therein of a large Hospital, the Hotel-Dieu. Thus a large number of deaths from that institution, tell against the smallest ward population.

The deaths from the Montreal General Hospital which is situated in the St. Louis ward affect the percentage of deaths in a fractional degree only, in consequence of the larger number of residents in that ward. The deaths registered as from the Sœurs Grises have been excluded in the above calculations. The St. Ann's ward which is (with the exception of St. Antoine) the most populous ward in the city, would be reduced to almost a par with the Centre were these deaths added to the mortality hailing from that district. It will likewise be noticed that the calculations have been made exclusive of the special returns required by law of religious houses which occupy a separate column in the Census Returns, so that the comparison exhibits the ratio of deaths to actual residents in wards, amounting in the aggregate to 89.666. Exception therefore cannot be taken to omitting the deaths from the Grey Nuns. Furthermore, it is a fact admitted that three fourths of the children who die or rather are sent for burial from that institution are brought to Montreal from all parts of Canada and the neighboring States. It is customary when such is practicable to send them away at once to be nursed in the surrounding villages; when they die they are removed to the Cemetery and are registered as coming from the Sœurs Grises. In the next number of the Journal I will touch more fully on this subject.

(To be continued.)

REVIEW DEPARTMENT.

ART. LX.—*Practical Observations on the Disease of the Joints involving Anchylosis, and on the Treatment for the Restoration of Motion.* By BERNARD E. BROADHURST, F.R.C.S., Assistant Surgeon to the Royal Orthopedic Hospital. Third Edition.

Mr. Broadhurst is known to those surgeons who pay attention to the progress made in the treatment of diseases of the joints, and the remedying of deformities,

as a careful practitioner and zealous student in this branch of surgery. The views contained in the volume before us are the result of his experience up to the present time. He gives us a short account of the various forms of synovitis that may end in ankylosis as simple, acute, sub acute, and chronic synovitis; rheumatic synovitis, syphilitic and serotulous synovitis. The cases in which he has met with most success appear to have been those which resulted from rheumatic attacks about the hip joint. His success in the treatment of these has been very great, and indeed we consider that it is to this circumstance he is indebted for much of his reputation, for in the management of ankylosis in other joints his treatment is not more successful than that of many other practitioners, nor has he added much to our knowledge in this branch.

Amongst some of the most interesting of the cases are four examples of ankylosis of the hip joint, the consequence of gonorrhœal, or as it is now termed *urethral* rheumatism, and there is also an interesting case of ankylosis of the hip following gunshot wound, in which his treatment was very successful. Before detailing some of these cases we shall allow our author to speak for himself on the points of diagnosis between bony and false ankylosis.

Mr. Broadhurst shows that the statement of Bonnet, made before anæsthetics were employed, that we have not any certain signs by which we can recognize bony ankylosis, cannot apply to our practice in the present day, for by means of chloroform we are now enabled to detect bony from false ankylosis. It may be impossible, however, so perfectly to grasp a bulky limb with one hand above and the other below the articulation, and thus to overcome the influence of its proper muscles, as that no doubt should exist with regard to the condition of the articulation.

“As a general rule, the sensation of solidity is unmistakable on grasping the limb above and below the articulation. Bony consolidation in the moveable articulation is so rare, however, that an examination should always be instituted after the full effect of chloroform has been obtained, before an opinion favorable to synostosis is delivered.

“False ankylosis is the rule; and it is so common that adhesions should always be held to be fibrous, until they are proved to be bony.”

“Immobility alone is not a sign of synostosis; it not unfrequently exists where the adhesions are fibrous. And even where chloroform has been administered, immobility may be as great as before.”

“Immobility will frequently exist until muscular action is entirely removed through anæsthetic influence: then, a certain, definite amount of motion may usually be obtained. Occasionally, however, the limb will remain utterly motionless as before, but the sensation communicated to the hand will not be that of bony union.”

Mr. Broadhurst gives some good practical rules which we quote.

“Whenever the muscles can be thrown into action so as to render the tendons prominent, or tense about a joint, the adhesions are not bony; nor are they bony where the slightest motion is found to exist. Great gentleness and tact are necessary to distinguish exactly the condition of a joint. Rough handling is inadmissible in any case.”

It is not so easy to distinguish whether the adhesions are intra or extra-capsular.

"Frequently it is impossible to make this distinction, except when force is being applied, and the adhesions are being ruptured. There, it may usually be stated with precision; and not only the positions of the adhesions, but also their extent."

Our author points out how the form of inflammation that attacked the joint in the first instance will assist us in arriving at a correct diagnosis and that upon our forming a correct diagnosis will depend our selection of the method of treatment to be adopted, in other words whether we shall proceed by gradual extension, or at once break up the adhesions and forcibly overcome the ankylosis.

The following interesting case will illustrate what Mr. Broadhurst recommends, and affords a good specimen of urethral rheumatism.

W. G——, aged 23, July 1859:—Four years ago having exposed himself to infection of gonorrhœa the urethral discharge appeared on the 7th day; and it was followed, in a fortnight, by pain and swelling in the knee joints. This inflammation about the knees lasted for two months, when it entirely ceased, and he appeared to be well. The gonorrhœa also had ceased, having yielded to cubebs in three weeks.

Two months after the articular inflammation had ceased, he was again attacked; this time, however, with tenfold violence. On this occasion the right-temporo-maxillary articulation first became inflamed, and later other joints in the order in which they are here mentioned, namely, the ankle and the hip of the left side, the right hip, ankle and knee, both thumbs, both elbows, and both shoulders.

The joints of the upper extremities recovered well, without any perceptible trace of inflammation being left; but the jaw became stiff, as well as both hips and both knees. During the continuance of the inflammation, the right hip and the left knee were more painful than the other joints, but the right knee was much more swollen than the left, and the right hip was more swollen as well as more painful than the left hip.

There was slight motion of the jaw, which allowed the incisor teeth to be separated to about one eighth of an inch. And the left knee also could be slightly moved, just sufficient to alter the angle, but the leg could not be extended, the hamstring muscles being contracted. In the other affected joints there was no appreciable motion.

Such was his condition, when it was suggested by Dr. William Clarke that he should consult me.

I had the advantage of meeting Dr. Gull and Mr. Fergusson in consultation; when it was agreed that the forcible rupture of the adhesions offered the only means of restoring the motion of the joints. It was therefore resolved to try the effect of forcible rupture on the left hip joint.

For this purpose we met on the 4th of August, having moulded a splint, and having fixed my patient in the recumbent position, in such a manner that motion of the pelvis was prevented, I secured the right thigh in an extended

position upon the bed, while the left was slung so as to remove the weight of the limb. Chloroform was administered by Mr. Clover, until the action of the voluntary muscles was entirely overcome, when the limb was raised by Dr. Gibb until the adhesion was made perfectly tense. The patient being thus placed, the limb was in a condition to be acted on. I placed my right hand behind the lower end of the femur, and using very moderate force, and with one hand only, I made an effort to flex the limb. The adhesions yielded almost immediately, with a loud snap, almost like the fracture of a bone, and the motion of the joint was forthwith free. The joint was perfectly smooth, and the limb could be flexed and extended, and rotated inwards and outwards.

There was no pain in the operation, so that our patient could not for, some time, be persuaded that anything had been done, and could only be convinced of it by being allowed to move the joint. This he did readily, and immediately flexed the limb considerably, and without assistance turned over on his side; a feat which he had not been able to accomplish since his hips had been ankylosed."

At a subsequent consultation it was decided to divide the tendons of the biceps and semi-tendinosus and semi-membranosus muscles for contraction of the left knee. This operation was performed, the patient having first been put under the influence of chloroform, and afterwards gradual extension was employed. When we stated that Mr. Broadhurst's reputation for the treatment of ankylosis rested on the success of his hip-joint cases, we expressed our honest opinion, for we do not see where there is originality in conception, or unusual success in the treatment of ankylosis of the other joints, that he should have considered it necessary to introduce some of the cases he has related in his book. Most of them were such as hospital surgeons are in the habit of treating daily, without thinking they are doing anything wonderful or unusual; and we certainly were surprised to find such examples as Case xix, headed *Rheumatic Inflammation of the Temporo-maxillary articulation—Intra Capsular adhesions—Gradual extension*. This case is detailed at great length. We have often met with such, and one lately under treatment we have placed under the care of a careful nurse-tender: we should never think it worth recording in an octavo volume. The same remark applies to case vi. *Urethral rheumatism—Ankylosis of the Shoulder—Extra Capsular adhesions—Restoration of Motion*. And case v. is that of a young man who contracted gonorrhœa, some time after he suffered from inflammation of middle-joint of ring finger, which ended in a stiff-joint. The flexor tendon was divided, and the finger straightened. Even granting that the articular disease was of a gonorrhœal nature, which we are not prepared to admit, it was hardly worth while inserting such a case in a tome on ankylosis. There is throughout the treatise of Mr. Broadhurst a silence concerning the writings of such men as Little, Tamplin, Erichsen, and others of his confrères. The writings of Little are the most complete in the English language, and Tamplin's treatise has long been a guide to the general surgeon. The works are well known, and the writings of their authors should not have been ignored. They possess a decided advantage over Mr. Broadhurst's treatise, in the number and accuracy of their illustrations, the absence of which we consider a great fault in the work before us.

Dr. Copland some years ago complained of the manner in which the practice of Medicine and Surgery was being divided into specialities, and asserted that such divisions led to a "fussy practice." We are reminded of this in nearly every case given by Mr. B. Sir Benjamin Brodie and Dr. Gull assist at the consultation; Mr. Fergusson approves of this or that plan; Dr. Snow gives the chloroform, or our worthy and esteemed friend Dr. Gibb holds a leg or an arm, some one else fixes the pelvis, and Mr. Broadhurst manipulates, and we suppose pockets the lion's share of the fees.

ART. LXI.—*A Treatise on the Practice of Medicine.* By EDWIN R. MAXSON, M.D. Formerly Lecturer on the Institutes and Practice of Medicine in the Geneva Medical College. Philadelphia: Lindsay & Blakiston. Montreal, Dawson & Son, Svo. pp. 705, 1861.

It is seldom that we have examined or perused a work with more mingled feelings than the present. We say mingled feelings, because although we feel satisfied that the author has done his best in his own peculiar manner, we can detect no single instance in which his precepts or his practice have attempted even to improve upon those of his predecessors, and the surprise is to us, not only that the author ventured upon the publication of such a volume, but that he was enabled to get publishers to place the work before the profession.

The observation of many years seems to confirm the opinion, that it is a rule in the United States that every physician who perchance should fortunately succeed in securing a professorship in an American university or college, must *ipso facto*, produce a work on the branch to which he has devoted his studies, and on which he has lectured. We accordingly find that many, who have found the ground previously occupied, have contented themselves with sub-editing the works of European authors, re-issuing them with notes, corrections and emendations to suit them to the American climate as it were, the appearance in the shape of editorship satisfying their ambition. We desire to be far from even being suspected of saying that some of our most valuable works have not issued from the American press under such auspices. What we mean is simply this, that those who have so acted could undoubtedly have produced an original work of their own, creditable alike to themselves and their country. But, although we cannot forbear giving expression to these ideas, we cannot but help thinking, that however much it may flatter a person's pride to become a professor even in a fifth-rate university or college in the United States, the consequence is by no means apparent that he should give publicity to his lectures in the form of a volume, designated as a "Treatise on the Practice of Medicine,," nor does it by any means follow, however much we might hope it, that the "Treatise," if published, should contain anything that is "new," however much it may descant upon what is "true." In the volume before us we can find nothing that is "new" as regards its matter, but a great deal as regards its style, and of such peculiarities there is none more remarkable than what is contained in the two first lines of every opening chapter, in which the author finds it necessary to define the meaning of the terms by which he recognizes diseases, thus, "by the

term Peritonitis, I mean inflammation of the serous lining of the intestines," and so on. With regard to the peculiarity of the work, we have only to remark, that if the volume was intended for the profession, as one embodying the writer's views, however peculiar he may have thought them in many respects, such definitions of the names by which diseases are characterized were altogether supererogatory, and if, on the contrary, the work was intended for students of medicine, we can only say that it pays but a poor tribute to their literary or rather classical acquirements, however much it may contribute to a correct appreciation of those of the author.

Throwing these objections aside, but which have obtruded themselves strongly on our mind, we can perceive nothing in the work which does not correspond with our usually received opinions as regards either the "principles or the practice of medicine." The author's reasoning is good whenever he attempts it, and his practice is equally good wherever he recommends it. One objection against the volume lies mainly in the fact, that no matter to what extent the author's "professional career had been one of activity," something more is demanded from an author "on the Principles and Practice of Medicine," than an active professional career during a few years, and the temporary occupancy of a chair on that branch in a college, assuredly not one of the most eminent in the United States. A writer of such a work requires opportunities, and extensive ones, such as are afforded by access to large hospitals, independently of the advantages of a private practice of the largest character, in the former of which the author has been signally deficient.

We must say that we regret to find ourselves compelled to make these observations. The science and practice of medicine, as well as those of its collateral branches, are at the present day far beyond the art of mere book-making. We have stores of information collected in works of the most valuable character, on the three branches of Medicine, Surgery and Midwifery, and unless something new can be added, or some new arrangement of old matters effected, which would prove of service to the profession, works of a profitless character should be reprehended. While therefore we cannot but admire Dr. Maxson for his industry in compiling what is in reality a by no means bad treatise on "the various ills that flesh is heir to," we cannot approve of the taste which has induced him to publish it, and this merely because we cannot perceive that he has added anything whatever to our previous stock of knowledge, which ought to be the aim and object of every publication.

With the manner in which the esteemed publishers have completed their duty, nothing can be said except in terms of the highest commendation.

ART. LXII.—*Transactions of the Obstetrical Society of London, vol. 2, for the year 1860, with a list of Officers, Fellows, &c.* London, Longman, Green, Longman, and Roberts, 1861, p. 368.

This Society, which has passed its second year of existence, is progressing most favorably in the opinion of the profession of England, if we may be permitted to judge by the large acquisition of new members. The papers which the

second volume of its transactions present are generally of great interest, and indicate the avidity with which the opportunity has been seized by writers of laying their views on obstetrical subjects before their professional brethren.

The second volume of the Transactions of the Obstetrical Society will be found to compare favorably with their first volume. It contains no less than thirty-four papers on various subjects connected with midwifery, among the most important of which we may notice the following: "On the action of Belladonna on the mammary glands by Richard Marley, M.R.C.S.;" "On concealed accidental hæmorrhage at the latter end of pregnancy and during labour, by J. B. Hicks, M.D., Lond." "On special position and the Obstetric binder as aids in the treatment of impeded labour, by Robert Hardy, M.R.C.S.," "Cases of Mæmorrhagia treated by injection, or the removal of the uterine mucous membrane by the gouge, or both means combined, by C. H. F. Routh, M.D.," "Certain phenomena, facts, &c., connected with the power and act of propagation in females of the industrial classes of the Metropolis, by A. B. Granville, M.D." This is a very lengthy and most valuable paper characterised by close observation and sound deduction. "On Phlegmasia Dolens, by William T. Fox, M.D., Lond." "On the pathological lesion of Phlegmasia Dolens, by the same author." "On some exigencies in preternatural labour, by J. T. Mitchell, F.R.C.S.E." "An enquiry into the correctness of the doctrine of William Hunter in regard to retroversion or retroflexion of the gravid uterus, by W. Tyler Smith, M.D." This is also another most valuable monograph. "On the value of Anæsthetic aid in Midwifery, by Charles Kidd, M.D." There are a large number of shorter articles, illustrative of peculiar cases, and malformations, which however valuable for being placed on record, our space will not permit us to individualize.

The volume is illustrated by one engraving, and sixteen wood-cuts; we must confess that we scarcely think that these last are executed in the highest or most finished style of that art. They well represent, however, what has been intended, but we cannot help thinking that a work of this character should be regarded not only as a standing evidence of progress in the branch to which it is specially devoted, but it ought to be made to exhibit at the same time the like amount of progress in the tributary arts of which use is made. In the first volume there were no wood cuts. Their place was occupied by engravings of the highest style, and while they tended to ornament the work, they at the same time exhibited the good taste of the committee under whose auspices it was published.

The volume is, however, an exceedingly valuable one, and should be in the hands of every member of the profession who specially devotes himself to this branch of his profession.

ART. LXIII.—*Fisk Fund Prize Essay.* The morbid effects of the retention in the blood of the elements of the urinary secretion. By WILLIAM WALLACE MORLAND, M.D., &c., &c., being the dissertation to which the Fisk Fund Prize was awarded, July 11, 1860. Philadelphia, Blanchard & Lea; Montreal, Dawson & Son, 1861, 8vo. pp. 83.

Dr. Caleb Fiske, who in 1823 and 1824, occupied the position of President of the Rhode Island Medical Society, bequeathed, at his death, to the society the

sum of \$2000, the interest of which was to be expended annually for the best essays on subjects selected for competition by a duly appointed committee. The first premium, according to the publisher's notice, was awarded on the 27th June, 1836, and since that time a large number of valuable monographs have been annually laid before the profession. By the judicious management of the Trustees the fund has gradually increased, and they are now enabled in consequence to lay two prize essays annually before the profession.

The brochure before us is the second which obtained the prize for the year 1860, while in a previous number we have alluded to the first on Diphtheria. The monograph before us is a most valuable *recueil* of all that is known at the present day on the subject of the absorption of the elements of the urine into the blood. The subject embraces one of the most interesting pathological questions of the day, and has been most ably treated. The subject however is too diffuse for an analysis commensurate with our limits without doing the treatise a positive injustice. To all who are interested in the subject, we cannot do better than refer to the treatise itself, as one which will amply repay study. No physician should be without it.

PERISCOPIC DEPARTMENT.

MEDICINE.

AN ACCOUNT OF THE DISEASE OF COUNT CAVOUR.

By DR. P. F. C. DESLANDES.

The sudden death of Count Cavour has not only been a great public event, but in a medical point of view, particularly in England, the subject of very severe criticisms, which it might perhaps have been more proper not to publish before having received sufficient information. Having received on this subject a detailed and reliable account the editor of *L'Union Médicale* presents it in his paper under the form of a clinical case.

M. de C., *ætat.* fifty-one, of middle size, had a large head, a short neck, broad shoulders, and was of a lymphatico-sanguine temperament. He slept little (four or five hours in the twenty-four), ate much, and followed, as to diet, the custom of England, where he had lived in his youth. For eleven years he worked fifteen hours in a day. His occupations were incessant, and had been particularly so for the last two years. Except very slight attacks of gout, to which he was subject, and six years ago, an intermittent fever, which he had much trouble to get rid of, never had he experienced any serious or long disease.

For one year he had been complaining of very sharp colics, coming on at night usually, and which he treated by one or two bleedings. He was almost entirely his own doctor, putting little confidence in physicians generally, although he consulted them when he was sick. The physician who had attended him from his childhood had been dead two years, and was replaced by Dr. R., a man of merit, but who had not enough influence over the mind of his illustrious patient.

About the 15th of May, M. de C. having spent three days on one of his estates at Léris, near Verceil, a border country, exposed himself to the great heat of the sun in going through the fields. On his return to Turin he was observed not to be so well as

usual, and to be more irritable. On the 20th of May, after having dined with appetite, and without having presented anything peculiar in the evening, he was again seized with colic. He sent for his physician, and he was bled. The next day, 30th, the fever being intense, it was thought necessary to bleed him again twice. The night was calm, the sleep quiet. On the morning of the 31st, the apyrexia was complete. M. de C. thinking himself cured, acted accordingly. Contrary to the advice of Dr. R., he received many persons during the day, and dispatched a good deal of urgent business. He had kept his bed. The following night (that of the 31st of May), a new attack came on with reaction towards the brain. The abdomen was painless on pressure. At the request of the patient, bloodletting was again resorted to; and he was bled twice. The night of the 1st to the morning of the 2nd, he was almost sleepless. An injection was prescribed, and, in anticipation of a future exacerbation, the following prescription was given: Fifteen grains of citrate of quinine in twelve pills, two pills every two hours. At 10 o'clock, p.m., the fever returned, but was preceded, this time, by chills which lasted one hour. It continued during the night, and the next day, June the 3rd, at noon, it had not yet disappeared. A consultation with Dr. Maffani was appointed for 5 o'clock. The patient was delirious, and insisted on being bled. Bloodletting was practised for the sixth time at 4 o'clock, one hour before the consultation. The blood was without a buffy coat, rich in fibrine, and very plastic. At 5 o'clock the head was scarcely warm; the physiognomy was natural; the delirium had ceased; the tongue was moist; the skin good; the pulse full but soft, and the fever moderate. Nothing abnormal in the chest or abdomen. Urine rather muddy. At 10 o'clock the apyrexia was almost complete. 15 grains of citrate of quinine were taken in three doses, at 11, at 3, and at 6 o'clock. The calm did not last long. At 2 o'clock, a.m., on the 4th, another paroxysm supervened, with cold stage, which lasted one hour; then heat, with delirium, agitation, a burning head, and diarrhœa. At 7 o'clock the symptoms were not quite so intense. The patient answered questions; but left to himself, he immediately became delirious. The same dose of citrate of quinine was prescribed, together with cold applications to the head, and synapisms to the legs. At noon the fever had decreased, the apyrexia was almost complete.

At 8 o'clock there was a new paroxysm; the delirium of the same kind as before; ran on all the subjects which habitually engaged the attention of the patient. He still answered correctly any questions, said he did not suffer, but often carried his hand to his head, which was very hot. The paroxysm lasted all night. A draught composed of distilled water of lettuce, distilled water of oleander, and syrup of diacodium was given.

On the morning of the 5th, at seven o'clock, the fever was less intense, the pulse fuller. The urine rather abundant, with a slight deposit. Prescription; Citrate of quinine, xv. grs., acetate of morphia. two-fifths grs. To take in four doses. At noon the pulsations of the heart were obscure, and the pulse hardly perceptible at the left wrist. Four cups were applied at the nape of the neck, and there seemed to be a little improvement. At six o'clock there was a change for the worse, yet he was still conscious at times. At eleven o'clock he recognised the King. At two o'clock on the morning of the 6th, the body was covered with a cold sweat; the radial artery was no longer to be felt. The delirium was constant. Political men and affairs passed and repassed without order before the eyes of the patient. Mr. Farini had watched at his bedside. At 3 o'clock he gave him the papers destined for the King. At half-past four o'clock all consciousness had disappeared. At a quarter to seven o'clock a little rattle was heard: ten minutes after Mr. De C. was no more.

The above is the direct account of the symptoms of the disease, and the means used in its treatment. Now what was the disease? The beginning had been insidious, and might, as it did, on account of the precedents of the patient, give rise to doubts. However, we perceive from the administration of the citrate of quinine, that already, before the consultation with Dr. Maffani, the family physician had diagnosed an intermit-

tent fever. This learned physician shared this conviction, since the antiperiodic agent was used until the last moments.

If we review the symptoms we can no more or less clearly distinguish fine paroxysms of unequal duration and separated by unequal intervals. The first during the night of the 29th to the 30th of May; the second, in that of the 31st of May to the 1st of June; the third, in the evening of the 2d. As to the two others, one would have occurred in the night of the 3rd to the 4th, at two o'clock in the morning, and the other in the evening of the same day, at eight o'clock.

In this hypothesis, certainly very plausible, of an intermittent fever of a malignant type, many questions arise. The result was fatal, notwithstanding the repeated use of the febrifuges. Could they have been employed too late, and in too small doses? Could not the repeated bloodletting at such short intervals have diminished their effect? These repeated bleedings have struck our minds with astonishment. Mr. De C. was robust and in the habit of being bled. On this point we could only venture assertions. We will say, however, that when the access was very strong, blood-letting was observed to increase the intensity of the periodical concentrations.

As to the other question, every one knows that malignant intermittent fevers cannot be too soon attacked. A few days' delay may have thus influenced the result. Many physicians affirm that when treated in time and energetically, the success is almost certain; whilst others, having an experience equally great of these affections, declare the prognosis to be always very grave. Could these differences of opinion depend on the difference of locality and latitude where each one has practised? Again, the difficulties which the diagnosis presents are sometimes very great. If, as in some epidemics, the symptoms presented only an exaggeration of the usual stages of the febrile paroxysm, the error could be generally avoided. But these attacks are not only malignant, but sometimes marked by other morbid forms, by the *Fievre muqueuse ataxique* of Pinel, for example, which, according to our confrère, Dr. Cerise, seemed to have characterized Mr. De C's disease.

One remark and I have done. Does the citrate of quinine, in equal doses, possess the same action as the sulphate, much better known and oftener used among us?—*American Medical Times.*

ON THE ELIMINATION OF MERCURY, DURING AND AFTER ITS THERAPEUTIC EMPLOYMENT.

By Professor SCHNEIDER of Vienna.

It has lately been attempted to revive the old dispute as to the propriety of giving mercury and its preparations as remedial agents. So long as it is unknown whether, and in what quantity, a medicine, after being taken, is discharged from the body, the discussion regarding its effects must necessarily extend over a wide field; but in proportion as the domain of facts increases, that of hypothesis diminishes; and the questions regarding mercurialism and syphilis lose much of their importance so soon as it is established that mercury after its medicinal use, is eliminated from the organism by the kidneys, the liver, and the intestines. I have undertaken a series of experiments, which will, I trust, serve to facilitate the solution of points which have been long in dispute. Before I communicate my results, I must briefly describe the mode of research I have employed.

The most convenient test for mercury in the moist way is sulphuretted hydrogen. By means of it a sensible precipitate may be obtained from a solution of the bichloride of mercury in pure water, when 2 milligrammes (about 1-33rd grain) are contained in 50,000, 5 milligrammes in 100,000, or 10 milligrammes (1-6th grain) in 150,000 parts of the fluid; although 2 milligrammes in 250,000 parts cannot, by means of sulphuretted hydrogen, be recognised by any visible change. When the mercury is dissolved in urine, the test is less delicate than when the solvent is pure water. A sensible precipitate

may certainly be obtained when from 10 to 20 milligrammes are contained in 100,000 parts of perfectly fresh urine, and the solution is saturated with sulphuretted hydrogen. But if the elements of the urine have begun to undergo decomposition, none of the black sulphuret is thrown down, even though from 20 to 50 milligrammes of the chloride are present; often there is only a muddiness produced, from which dirty yellow flakes are gradually deposited, and if, as often happens, the fluid cannot be cleared by filtration, mercury may be found by the electric test, not only in the precipitate, but in the filtrate. It is impossible, when chloride of mercury is present in the urine in a state of extreme dilution, to obtain it all in the form of the sulphuret. I have satisfied myself by numerous experiments that the employment of alcohol or ether is of no advantage when the mercury is contained in an organic mixture for qualitative analysis they are unnecessary—for quantitative, insufficient. The most delicate method for obtaining the smallest quantities of mercury from the most dilute solutions, is without doubt electrolysis. It is not, however, sufficient to have the metal deposited at the negative pole of the battery, it is necessary to prove the character of the deposits by chemical tests. [The author here enters into chemical details which it is unnecessary to reproduce.] From having performed numerous experiments on mercury dissolved in pure water, and in organic solutions, such as urine, I have satisfied myself that the electrical test is the most certain method of recognizing the smallest quantity of mercury, but that it is not well adapted to a quantitative analysis. I have also observed that, where in addition to mercury, the urine contains iodide of potassium, the metal cannot with certainty be directly separated by electrolysis, but that the iodine must in the first place be removed.

Having satisfied myself as to the best modes of performing my analyses, and having made myself acquainted with the various circumstances which must be taken into account in examining organic matter, I next proceeded to my actual experiments. My examinations embraced the following substances:—

1. The urine of persons affected with secondary syphilis, but who had never been treated with mercury.

2. The urine of persons suffering from secondary syphilis some of whom had been treated with mercury long before; others were undergoing mercurial treatment; while others were taking iodide of potassium after having been treated with mercury.

3. I examined the urine of two persons who had suffered for three years from mercurialism; and one of them having died, I also examined his liver and brain.

4. I examined portions of the bones, the liver, spleen, kidneys, and brain of a person who had suffered from syphilis for five years, had been three times treated with mercury, and who had died of pericarditis a few weeks after the last mercurial treatment.

5. In the case of two persons under treatment by mercury, I endeavoured to determine how much of the metal was discharged by the urine and fæces. The saliva was also examined in these and some other cases, but no trace of mercury was ever detected in it.

In reference to the urine, I may state that the quantities examined was always considerable. In only one case was the analysis confined to that-passed in twenty-four hours; in all the others the urine of not less than three to six days was employed. In the individuals who had been treated by mercury some time before, or who had taken iodine, the urine was collected during from ten to fourteen days.

The results of my observations were as follow:—In the urine of syphilitic persons who had never taken mercury, no trace of that substance could be detected. An examination of the urine of nine individuals who had been treated by mercury some time before, led to the same negative result. The following is an example of one of these observations: An individual, in the year 1858, was treated with mercury during a considerable time; he took, on the whole, 25 grains of corrosive sublimate internally and rubbed in 6 drachms of mercurial ointment; subsequently he took iodide of potassium to the amount of an ounce. The following year the secondary symptoms reappeared; a

year and a-half from the time when he had taken mercury, the urine passed during ten days was examined, but no trace of the metal was found.

While mercurial preparations are being taken internally, the urine constantly contains the metal. Within two years I have examined fourteen cases of the kind, and have always arrived at a positive result. I have always submitted to analysis the urine passed during several days, as I had observed that the quantity passed in twenty-four hours was insufficient,—in such small quantity is the metal discharged by the kidneys! The elimination of mercury also continue for some time after its use has been suspended. For the first eight days the urine is invariably found to contain it; in one case I detected it four weeks, and in another six weeks, after its internal use had been discontinued, by submitting to analysis the urine collected during four days.

The opinion, pretty prevalent at present that the use of iodide of potassium favours the elimination of mercury from the organism, is not supported by my observations. During the last two years I have undertaken a considerable number of examinations of urine, with a view to arriving at a decided conclusion as to this point. I have examined the urine of individuals who had been put upon iodide of potassium immediately, or a few months, or even years, after the mercurial treatment. As I had already observed, that when the urine is rich in iodide of potassium, the electrolytic deposit of mercury does not follow with certainty, I made it a rule to set free the iodine by the addition of sulphuric acid containing nitrous acid; but in spite of this, I never found in such urine a marked increase in the quantity of mercury. If the treatment by iodide of potassium was commenced immediately after the discontinuance of the mercury, the urine invariably contained the metal, just as in the case where no iodine had been taken; the longer the time which had elapsed from the termination of the mercurial ointment, so much the less considerable was the amount of the mineral found in the urine; if several months had elapsed between the two modes of treatment, the search for mercury was always fruitless.

The two cases of mercurialism were for only a few days under clinical observation. The quantity of urine at my disposal was small; it amounted, in the case which terminated fatally, to $38\frac{1}{2}$ ounces, in the other to 64 ounces. The urine of the first patient was collected two days before his death; it was turbid, rich in albumen and pus-corpuscles, and contained so large a proportion of mercury, that after an hour's exposure to the electric current, the negative pole was thickly coated with it. In the urine of the second patient, albumen, though less abundant, was also present; it speedily became alkaline, yet the mercurial reaction was immeasurably stronger than in any of the cases observed by me where treatment by mercury was in force. I examined the brain and liver of the patient who died, and found mercury in both organs, more abundant in the liver than in the brain.

Under the fourth head, my observations lead to some important results. A short sketch of the case in question may contribute to a proper estimation of the results of analysis. A soldier, 33 years of age, had an attack of typhus in his twenty-first year; this was followed by ascites, scurvy and chronic catarrh, which incapacitated him for his duties for six months. In 1852 and 1853 he had an attack of inflammation of the left lung. In 1853 he, for the first time, contracted a gonorrhœa, which was cured in eleven days, by sulphate of zinc injections, but was followed by a bubo on the left side, which suppurated and healed in seven weeks. In 1856 he contracted a chancre, and again had a bubo on the left side, which was not healed until after eight months of treatment, red precipitate being the principal remedy used. In August, 1860, syphilitic ulcerations are said to have appeared spontaneously on the glans penis. When admitted into hospital he presented all the symptoms of secondary syphilis; there were ulcers the lips and throat, and a maculated eruption on the skin. The patient, in the course of fourteen days, took twelve grains of corrosive sublimate; during the following days he took daily half a pound of decoction of sarsaparilla, and fourteen days after the discontinuance of the mercury he was ordered iodide of potassium, of which he took half

an ounce in the course of a fortnight. By the end of October the condition of the patient was much improved, but the disease was not cured. On the 13th of December he again came under treatment. From the 6th to the 29th of January mercurial inunctions were employed, and in this time he used 20 drachms of ointment, containing 6 drachms 40 grains of quicksilver. From the 2nd to the 13th of February the patient took daily a scruple of iodide of potassium; as his strength was much diminished, he was also ordered quinine. On the 10th of March the first symptoms of pericarditis manifested themselves, and he died on the 5th of April. In regard to the post-mortem appearances, I shall merely mention that minute hæmorrhagic extravasations were found almost everywhere; the lymphatic glands were generally indurated, in some places evidently degenerated (waxy?). The liver was enlarged, hard, and dry; the spleen also was indurated, and a section was found uniformly dry and dull-looking; there was no recognizable anatomical alteration in the bones. The lower half of each femur, half of the liver, the whole spleen, the half of each kidney, the cerebellum, and half of the two cerebral hemispheres were submitted to chemical examination. In the kidneys alone a very minute but undoubted trace of mercury was found; in the liver, the reaction was doubtful; the bones, the brain, and the spleen, contained no mercury.

I think this case forms a sufficient contradiction to the doctrine that mercury is retained in the organism, and can give rise to the manifestations of secondary syphilis. Two months after the last external mercurial treatment, which was energetic enough, six months after the internal use of corrosive sublimate, mercury could no longer be found in the brain and the bones, the organs particularly indicated as those in which the metal accumulates. The organs, on the other hand, which serve in an especial manner for the elimination of the metal, the liver and kidneys, presented, the former equivocal, the latter undoubted, traces of it, being as it were the last witnesses to the nearly-accomplished work.

In the case of two individuals under treatment by mercury, who could be depended upon in coöperating in the collection of all their discharges, I endeavoured to determine the amount of mercury which was eliminated by the saliva, the urine, and the fæces, during the time they were taking the drug. The patients had a light, chiefly a milk diet, but in the course of the treatment were allowed some roast veal. In neither case was any mercury found in the saliva. The first individual took, in the course of ten days, 5 grains of corrosive sublimate made into pills, with althæa powder and water, and at the end of this time a dose of castor-oil. From the urine 4 milligrammes (about $\frac{1}{7}$ of a grain), from the fæces 0.231 gramme (about $3\frac{1}{2}$ grains), or, on the whole, 0.235 gramme of sulphuret of mercury was obtained. This corresponds to 0.2745 gramme of the sublimate, which corresponds to 3.764 Austrian grains. At the end of the treatment, accordingly, 1.23 grain of sublimate was unaccounted for.

The second individual took, in twelve days, 25 grains of calomel, made up with sugar into fifty powders. Before and after the treatment castor-oil was administered. From the urine 29 milligrammes (nearly $\frac{1}{2}$ grain), from the fæces 1.239 gramme (rather more than 17 grains), or, on the whole, 1.268 gramme ($17\frac{1}{2}$ grains) of sulphuret of silver was obtained; this corresponds to 17.65 grains of calomel, thus leaving 7.35 grains to be accounted for.

In estimating these results, it should be borne in mind that they do not express absolutely, but only approximatively, the amount of mercury eliminated; for as I have already stated, the method of analysis not being quite accurate, the amount really discharged is somewhat larger. I do not think that with the results of these two observations, I have solved the question regarding the amount of the metal discharged during the mercurial treatment, but they are of some interest when taken in connexion with my other researches. Both observations show that not more than 25 per cent. of the mercury taken remains in the system; it has likewise been proved that after the treatment, mercury is got rid of by urine for some weeks. The fact which I discovered, that some months after the use of mercury has been discontinued, and even when iodide of

potassium is employed, none of the metal is found in the urine, has its simple origin in this, that there is no mercury in the organism. Proof of this lies in the fact, that in the corpse of an individual who had twice been under mercurial treatment during the last six months of his life, only traces of the metal could be found in that organ by which its elimination chiefly takes place—namely, the kidney.

It would be of great importance to submit to minute examination the organic elements of urine which contains mercury. I have not found that such urine is always albuminous.—*Medizinische Jahrbucher Zeitschrift der K. K. Gessell. der Arzte in Wien and Edinburgh Medical Journal.*

ON THE EMPLOYMENT AND VALUE OF THE SEMEN DIGITALIS AND ITS DIFFERENT PREPARATIONS FOR THE TREATMENT OF ORGANIC AFFECTIONS OF THE HEART.

By Dr. PFAFF.

The following are the principal rules to which Dr. Pfaff recommends the principal administration of digitalis in disease of the heart:—1. The digitalis ought not to be administered in increasing but rather in decreasing doses. 2. We ought to diminish the dose as soon as the paralytic action on the heart and the arterial system becomes evident. The calming power exercised by the digitalis on the activity of the heart is durable, and lasts sometimes during five or six weeks.

The digitalis ought not to be continued, under whatever form it may be, for more than six or eight days, and if, after eight days of its employment, the wished-for result has not been obtained, we must have recourse to colchicum. This also exercises a calming action on the heart, and if, after its employment, we have again recourse to the digitalis, the remedial symptoms are more readily manifested and more prolonged.

In torpid subjects the administration of the digitalis may very well be preceded by, as it were, a previous cure by colchicum. In most cases it is advantageous, in order to avoid disagreeable effects of the digitalis on the organs of digestion, to have it associated with aromatics, or bitter and tonic extracts.

In old persons it is better mixed with quinine; in tuberculous persons with opium; in anasarctous persons with liquor potassæ, acetate of ammonia, squills, and spirits of juniper; in plethoric people with tartar emetic sulphate of potash and nitre; and in anæmic persons with extracts and tincture of iron.

In noticing the different preparations of digitalis, the following is the opinion of Dr. Pfaff. The powder is an excellent mode of administration. Nevertheless Dr. Pfaff prefers the infusion.

The powder, indeed, affects the stomach in a more decided way, and brings on the heartache and pains in the stomach, whilst the infusion oftener produces collic. The decoction causes this action on the bowels a higher degree, but it has also more diuretic properties than the other preparations.

The alcoholic tincture has the same action as the infusion, but in a smaller dose. It provokes congestive, cerebral phenomena, giddiness, &c. The same action is produced, and more rapidly, by ethereal tincture, but disappears as soon as the cardiac symptoms begin. One of the most interesting points in these researches of M. Pfaff relates to the external employment of digitalis. In opposition to the opinion of many physicians he regards this mode of administration as being capable of rendering service in cases where complications hinder its internal employment. He remarks, for instance, on the utility of a mixture of equal parts of chloroform, and ethereal or alcoholic tincture (eight grammes of this mixture in a poultice three times a day), to be maintained as long as a sensation of burning remains.

In the same way, M. Pfaff recommends the application, on the seat of a blister, of thirty centigrammes of powdered digitalis morning and evening. Sometimes one application will succeed in keeping down the activity of the heart during weeks and

months. Lotions with a mixture of tincture of digitalis and vinegar, are very useful in cases of ascites and œdema of the inferior extremities.—*Dublin Medical Press.*

CHLORIDE OF ZINC IN DISEASES OF THE SKIN.

Since Hanke, in 1841, called attention to this remedy, Dr. Veiel, of Cannstatt, has employed the same in the following three forms :

1. Spirit of alcoholic solution : equal parts of the chloride and alcohol.
2. Liquor or aqueous solution : chloride of zinc and muriatic acid, of each ten parts ; water, five hundred parts.
3. Sticks or pencils, prepared like the sticks of caustic potassa, with which this form also corresponds in the manner of application.

The sticks are used to destroy hypertrophic lupus, by repeated boring ; in exfoliative and exulcerative lupus the application of the spirit, followed by the liquor, prove sufficient. Superficial or erytematus lupus requires the spirit attenuated by the liquor. Other cutaneous diseases benefited by these preparations are : obstinate eczema of the eyelids, lips, genitals, anus—the spirit painted over ; solar and impetiginous eczema—the liquor applied daily ; eczema of the tongue, fissures of the nipples, scrotum or hands, callosities, etc.—one part of the spirit mixed with ten parts of the liquor ; remains of psoriasis—spirit ; a certain form of palmar psoriasis, with corn-like painful protuberances—stick ; sycosis, favus, and some varieties of acne—liquor ; circumscribed indurations on the nose, cheeks and lips—spirit ; chronic ulcers of the feet, with callous edges—spirit ; cyst, ulcerating glands, fistulæ—spirit ; condyloma, molluscum, seborrhœa, burns, chilblains—liquor.

The chloride of zinc enters into combinations with nearly all the elements it meets, and produces a descending irritation, which leads to contraction of the surrounding parts. Hence result diminution of the wound, speedy formation of pus, detachment of the crust and granulation, and finally a good scar. On this account the chloride is preferable to acids, caustic potassa, nitrate of silver, iodine, and other caustics.—*Zeit. d. Gesel. d. Aerzte zu Wien—Cin. Lancet and Obs.*

TREATMENT OF GOUT.

Trousseau conceives the following combination, proposed by M. Becquerel, to be most efficient : Sulphate of quinine, twenty two-grains ; extract of colchicum-seeds, eight grains ; extract of digitalis, four grains ; divide into ten pills. Two or three of these pills should be exhibited in the course of twenty-four hours, for two, three, or four successive days. The success is sometimes wonderful, the excruciating pain of a genuine acute paroxysm yielding in seven or eight hours, and the attack itself subsiding in two or three days.—*Dublin Medical Press.*

PHYSIOLOGY.

EXTENSIVE REPRODUCTION OF BONE.

Dr. Sands presented two specimens of tibiæ which illustrated in rather a remarkable manner the reproductive power of bone. The specimens were sent him by Dr. W. J. Almon, of Halifax, who also furnished the following history :—

“ The boy died suddenly a few days ago of serious effusion into the ventricles of the brain. I send you the bones of both legs, in order that you may compare their relative length, and the size of the two fibulas. The patient, aged twelve years, was an inmate of the Halifax Poor Asylum, of a pale complexion and scrofulous habit with necrosis of

the tibia; the dead bone showing itself about an inch below the tuberosity of the tibia, and at other points to about two inches above the ankle-joint. There was constant discharge from the leg, hectic fever, and other constitutional symptoms. Several months after he had been admitted into the Asylum I made up my mind to remove the necrosed bone. After I had commenced the operation, I found the dead and new bone so intimately connected, and my patient's strength sinking, I then thought that it was best to remove the whole bone, which I accompanied by sawing it through just below the tuberosity, and about two inches above the malleolus, and dissecting out the bone. There was but little hemorrhage, and notwithstanding a rather severe attack of small-pox, which set in a short time after the operation, the wound healed by granulation. For the last few months the boy has been learning the trade of a shoemaker, and has walked about with the aid of a crutch, and when not watched, without it."

On close inspection of the specimen but two points were seen where the bone had failed in its reproductive efforts, and one of these was about an inch above the internal malleolus, and the other about an inch and a half above the middle of the shaft. From the superior articular surface of the tibia to a distance of six inches there is a continuous formation of bone. Although the amount of bone reproduced was very considerable, Dr. Sands still regarded the specimen as illustrating the truth of the conclusions arrived at by the German experimenters, viz., that in cases where the periosteum was removed there the effort at restoration was very imperfect. He did not think that in the case under consideration the reproduction would have been any more complete.—*American Medical Times.*

REPRODUCTION OF BONE.

Mr. Hamel read before the Academy a series of cases of regeneration of bones. Of the five cases I come to submit to the appreciation of the Academy, four, said he, are mine. The periosteum, as formative and regenerating organ of the osseous tissue, has obliterated a large perforation of the frontal bone, reproduced the right half of the lower jaw, the greater portion of an ulna, a portion of the body of a femur, lastly, almost the whole of a tibia.

At the time when osseous regeneration seemed a dream, although it had been the object that led Mr. Flourens to his researches on the periosteum, a man, 36 years of age, came to consult me for a perforation of long standing, near the left frontal eminence. The hole was nearly circular, large enough to pass the thumb through it but thickset with asperities. There existed as a consequence of this, a hernia of a portion of the brain and of the dura-mater. I advised him to apply permanently a piece of leather on the hole. Several years elapsed, the hernia at last completely disappeared. I had lost sight of the man, although we lived in the same city, when I was requested by the civil authorities to certify to his death—he had died from superficial cerebral hemorrhage, the result of a violent blow with the fist received in a fight. I remembered his old infirmity, and examined carefully the cranial cavity. To my great surprise, I found a whitish periosteal membrane of new formation, uneven, rather thick, of a cartilaginous appearance, applied on the dura-mater to which it adhered towards its centre. It was situated in front of the frontal perforation, whose rounded shape it had, and to which it must have been abruptly attached. The gradual but entire occlusion, the only admissible cause of the complete disappearance of the cerebral hernia, could not be but the result of a slow and reparative process. How it did take place would be difficult to explain. However it be, nature has shown, in this circumstance, how far her resources and her generative power can go.

In the second case (a necrosis of almost the whole of the left lower maxillary bone), the restorative power of the periosteum became apparent from the moment that the work of insulation was ended. The necrosed bone was entirely reproduced, the teeth only

were wanting. The angle of the jaw remained less projecting, more receding; it gained in width and thickness what it lost in height.

A short time after this cure, a muleteer, 28 years of age, came to me with the left forearm rather painful and twice the natural size. In the middle of the suppurating wound, seventeen and a half inches in length (fifteen centimètres), stood half bare the necrosed body of the ulna. A fall from a horse, violent enough to produce at first an enormous and painful swelling, had induced a fistulous abscess about the lower third of the ulna, where its denudation took place. When I probed the ulcer, it was red, hard, and granulous. Although very extensive already, the two extremities of the bone were not visible. As it was movable at one point, I sawed it with a small, convex, watch-maker's saw, then with the circular saw of the trephine. The lower fragment detached itself a few days after, breaking into two. The fall of the upper fragment took place only three weeks later. On examining the external surface of the periosteum, rugose and bleeding, I perceived that this membrane had become three times thicker and had acquired a strong consistency. Three months had hardly elapsed, when the patient, notwithstanding an imperfect cicatrization, used his forearm, whose volume was still larger than that of the other. The shape of the new ulna, where regeneration had taken place for a length of nine inches (eighteen centimètres), varied also in some parts. This twofold osseous reproduction is so much more remarkable that it took place in a country, the habitual hygienic conditions of which were very unfavorable to this reparative process.

Pierre Ravult, 14 years old, fell from a horse in April, 1859. This was soon followed by a deep fistulous abscess along the internal part of the right leg. At the end of nine months a fistulous tract left bare the necrosed tibia, and the first ulcer healed. When he came to consult me, in August, 1860, his leg was in a frightful condition, it had doubled in volume. The anterior portion was occupied by a deep ulcer with everted edges. The principal bone necrosed to the extent of ten and a half inches (twelve centimètres), was prominent in its middle, isolated from the soft parts, and saturated with a fetid and abundant pus.

The preservation seemed to me at first an utopia. I flinched at first, however, at the idea of amputating. After mature reflection I decided on waiting. The strength of the patient, instead of failing, had improved. To a vast local suppuration, disinfected by chlorine, was opposed an assimilation sufficient to replace the everyday losses. I favored it by the use of barks, wine, and ferruginous drinks, cod-liver oil, with iodine and a reparative animal diet. Under such conditions, and always preoccupied with an idea which, as it seemed to me, could be realized, I resolved on cutting, with the saw, on the projecting part of the denuded bone, as far as the medullary canal, and dividing it in three parts. I was in hope to render the fragments more movable, and to insulate them sooner from the periosteum, the reparative work of which I was afraid they might retard. The natural irritability of the subject, the capricious irregularity of the digestive organs, the too often repeated capillary hemorrhages, arrested my efforts, and answered but imperfectly the end I had proposed to myself. However, after the fall of two thick fragments, situated at the opposite extremities, the body of the tibia detached itself in its turn from its two articular epiphyses. From that time, January, 1861, the reparative process, long begun, pursued its progressive march; the osseous woof spread soft and spongy as it became more solid. I discovered no trace of a new medullary canal. I could study the metamorphoses which the new bone underwent until its entire development, as much in its aspect, its color, the saturation of its tissue, its gradual thickening, as in its greater force of consistency, always increasing, and more marked than before. There truly is revealed to the eyes of the observer: the important part which nature has assigned to the periosteum.—*Dr. Derlandes in American Medical Times.*

MIDWIFERY.

ON THE EMPLOYMENT OF PRESSURE IN THE TREATMENT OF CLEFT PALATE.

I am not aware that the subject of using pressure in treating fissure of the palate has been before suggested. I am inclined to think that it has not; for when the plan first presented itself to my mind in 1851, I carefully examined French, German, English, and American works to see whether it had. I was first led to try it on the dead body of a child, which had died three weeks after birth. The fissure was longitudinal, and large enough to admit the extremity of the little finger; fissure of the lip also existed. By means of a pair of clamps, the sides of the fissure were brought readily in contact, without any fracture or displacement of the bones; the only fault was that the gums of the upper jaw were within those of the lower; but Nature would modify this as the living child grew up; the use of pressure on the lower jaw would remove a great deal of this deformity; of course the amount of deformity would depend on the size of the fissure in the palate. I several times repeated the experiments on young dogs, removing a piece of the palate bone by means of Hey's saw, and then applying the pressure. The animals did well.

The operation should be performed as early as possible after birth, when the bones are in their softest condition. The following is the plan which I would suggest:—The edges of the fissure having been pared, the superior maxillary bones should be embraced by a horse-shoe shaped clamp, with a shelf on its lower border to receive the gums and prevent it slipping. It should be padded with india-rubber or some other material to prevent the germs of the teeth being injured. The clamp should work on a joint, and possess arms. It may be said to resemble a large pair of pincers with horse-shoe shaped blades. A screw may be attached at the extremities of the handles for the purpose of bringing the blades in contact, or the hands may be used; the former would be, I think, preferable, as the force could be applied gradually, and not be likely to be carried too far. It may also be employed in grown up children when the bones are so widely separated as to render it difficult to get soft parts enough to close the opening, but in a gradual manner and at intervals, more or less prolonged, according to the amount of pain it excites. If it were used suddenly it might produce inflammation, and subsequently abscess, which would prove troublesome to treat. From the foregoing it will be, I hope, understood that the younger the child the safer the operation is likely to prove, and that even in grown-up children it may be adopted, with precaution, with decided benefit.

The pads and the ledge to rest the teeth upon should be made to slide in the sides of the clamp; the former, that the pressure may be directed on any part of the bones; the latter, that the edges of the teeth may rest on it, without the pressure being directed either too high or too low, but at the point where the palate bone joins the superior maxillary.—*Dublin Med. Press form Australian Medical Record.*

CASE OF DISLOCATION OF THE COCCYX.

By Mr. SKEY of St. Bartholomew's Hospital.

The subject was an eminently sensitive and hysterical young woman, aged 20, who sustained the injury by a fall in the street three weeks prior to her admission into the hospital. At the date of the accident she was far advanced in pregnancy, and she miscarried in the interval. Examination detected a displacement of the bone, which was thrown forwards at a right angle with the sacrum, the point projecting against the rectum. Tolerably firm pressure made through the bowel readily replaced it, but it returned to its abnormal position immediately on the remission of the pressure. My first intention was to operate on the bone from within, and with this view I designed a metal

spring, as thin in the neck as was compatible with strength, to be introduced into the rectum; but the difficulty of fixing it to the pelvis, and of employing the exact force requisite, was insuperable; besides which, I had no experience as to the capability of the bowel to bear the required pressure for many days, and probably weeks. I then determined on the experiment of direct traction of the bone, and having cut down upon it, passed a thin silver wire around it at about three quarters of an inch from its extremity. The wire broke, and I replaced it with a large silk thread, which was drawn tightly round the point of a broad wooden splint adjusted to the woman's back. The experiment, however, was not very successful: symptoms of very active hysteria manifested themselves, and she declared the pain to be insupportable. Some amount of local irritation certainly attended the progress of the case, with local redness and moderate suppuration, but not to an extent commensurate with her suffering. She wore the instrument for twenty days, during the whole of which she declared the pain to be very severe. For a few days she appeared relieved, but the bone returned to its abnormal relation to the sacrum. Subsequently she became eminently hysterical, and even maniacal, and I was compelled to remove her from the ward. From this state she recovered, her condition gradually improved, and she left the hospital relieved from her symptoms, both local and constitutional.—*Dublin Medical Press.*

RAPID ABSORPTION OF PUS FROM THE ANTERIOR CHAMBER OF THE EYE.

If any of our readers still doubt as to the possibility of the absorption of pus the following case may be of interest. It illustrates an event which is not at all unfrequent in the practice of our ophthalmic hospitals, though the process was certainly more rapid than usual:—

Richard D., a boy, aged 6, was admitted under Mr. Dixon's care, at Moorfields, on Thursday last. His right eye was acutely inflamed, there being a central ulcer on the cornea and hypopyon. The quantity of pus in the anterior chamber was, perhaps, about two drops, it was quite fluid, occupied the most dependent part of the chamber, and moved on motion of the head. There had been no known injury, the inflammation having commenced spontaneously with much pain three days before. The boy appeared out of health and feeble. He had already been well purged. A blister was ordered to be put behind the ear, and a grain of quinine to be taken three times a day. When the boy attended on the following Monday *every vestige of the pus had disappeared*, and the whole aspect of the eye was greatly improved.

The result of this case cannot but be instructive to those who advocate paracentesis of the anterior chamber in hypopyon. With regard to the general question of the absorption of pus, we may ask, why should not that occur in abscesses, in empyema, in suppuration of joints, which we see so clearly and so frequently in cases of purulent effusion into the anterior chamber of the eye?—*Lancet.*

HOUSEMAID'S KNEE.

MR. SKEX has purposely admitted into St. Bartholomew's, a large number of cases of this affection, and they may be supposed to have presented every variety of form, character, and stage of progress. "I am not sanguine enough," he observes, "to entertain the hope of shaking the confidence of many surgeons in the efficacy of blisters and tincture of iodine, which may be applied and reapplied for months without the smallest impression on the disease, so far as I have witnessed their effects. Indeed, with respect to the latter agent, I regret to say that I know of no chemical or therapeutical agent in such general resort as a local remedy in disease which is so commonly inoperative for good; and in these bursal diseases it appears to me to be especially so. If a full sized thread be passed through the centre of the swelling, be it large and hard, giving the

sensation of a solid mass, but in the centre of which is always found a small cavity or fissure; or be it soft, and containing fluid, whether large or small, suppuration in the course of from two to five or six days, will inevitably follow. The thread may then be removed. The disease is converted into an abscess, and may be treated as an abscess. I may assert, without exaggeration, that I have cured from 100 to 200 cases on this simple principle. No other caution is necessary beyond the removal of the thread when the orifices through which it has passed indicate the inflammatory action incidental to its presence.

"The same agent, and on the same principle, is equally applicable to *ranula*. Indeed, it is quite remarkable with what rapidity this disease recedes under the action of the thread, whether the cyst be of average or of the largest size. Of the latter I have reported some, and treated several of such magnitude as to require the lower end of the thread to be brought out in the neck at some distance below the base of the jaw."—*Lancet*.

MISCELLANEOUS.

ANTIQUITY OF THE HUMAN RACE.

Until very recently, zoologists as well as geologists were agreed that man did not exist before the Deluge. Some of the most eminent men of science even contended that, at that period, when the extinct races of elephants, hippopotami, and rhinoceroses, together with tigers, leopards, and hyenas, lived in this quarter of the globe, man could not possibly have existed. Thus Cuvier, in his treatise on the revolutions of the globe, said, it was settled that fossil human bones had no existence; and it is true that those which had been at first described as of gigantic human beings, were soon recognized to be remains of mammoths and other animals. But even then the question was not so entirely settled as the great French anatomist believed it to be. It was well known, that, in ravines and excavations of rocks, which had, by some catastrophe, become inaccessible to men, and which had not been visited for ages, human bones were found, together with such of antediluvian bears, hyenas, hippopotami, buffaloes, etc., and in some places they were even enveloped and covered with stalactites. This was explained by the supposition, that human remains had only come into those caves by some accident within our period of creation, long after the animal remains had been buried in it; but this was merely an hypothesis, and could not but be open to objection.

Recent discoveries can no longer leave any doubt on the philosophical mind that man really co-existed with the great mammalia of the diluvium; and although there are still those who deny this conclusion, the most eminent men of science have become converted to this theory. That the question has at last been cleared up, is solely to be ascribed to the researches of M. Boucher, who, during his whole lifetime, has worked at the elucidation of this problem, which he studied as far back as 1805, when at Marseilles, and visiting Roland's grotto, in which he searched for fossil human bones. He soon came to the conclusion that man had existed at a much earlier period than is generally supposed; in the first instance, he thought that the tradition everywhere extant of a human race destroyed by the flood could not possibly be without foundation. In that period there existed mammalia closely related to man, which could only live under the same atmospherical conditions as he, so that the earth was certainly inhabitable for mankind. He also found traces of man wherever the remains of the larger mammalia were found, and where no fossil remains of our species could be discovered, M. Boucher believed that they had been either destroyed or overlooked.

After long study the indefatigable zeal of M. Boucher was at last rewarded. He found in certain layers of the earth a few flints, which had evidently been shaped by the human

hand. Although this was, to M. Boucher's mind, a further proof of his theory, the learned world refused to accept it as such, and it was objected to him that these implements were not all like those carefully-shaped and well-sharpened stone-hatchets which are not unfrequently found in the most ancient tombs. M. Boucher then no longer sought allies in the learned world, but amongst the working men in the stone-pits, to whom he made known his object; and in 1840 he was in possession of twenty flints evidently shaped by men, which had been found in diluvial layers. He then gained some adherents to his views, but was still, by the majority of *savans*, believed to be a monomaniac.

Even so late as 1858 the French ridiculed his ideas. The learned societies refused to examine his propositions, and when he offered to make the government a present of his collection, this offer was not accepted. At last, by a happy accident, Mr. Falconer, Vice-President of the Geological Society of London, was induced to visit Abbeville. He inspected the cabinet of antiquities collected by M. Boucher, and gave a report of it on his return to England. From that time many English geologists travelled to Abbeville and to this city, and there appeared, one after the other, Messrs. Prestwich, Evans, Godwin, Austen, Flower, Mylne, Sir Roderick Murchison, and at last the leading English geologist, Sir Charles Lyell. After having carefully examined the drift, they all agreed with M. Boucher, and came to the conclusion that these flint implements were shaped by men, that they were found in virgin soil, that they were connected with the remains of an extinguished species, and that the period of them was anterior to the time when the surface of the earth had received its present configuration. Thus M. Boucher had, as he expressed himself, gained his action in England.

In the neighbourhood of Abbeville, in the valley of the Somme, immense diluvial layers exist, which rise to more than ninety feet above the level of the river. As they are cut through by the fortifications of Abbeville, by canals and by railroads, it is not difficult to examine them. The most important point is near Menchecourt. In some of these layers millions of large flints are met with, amongst which are some evidently shaped by the human hand. These are found from fifteen to thirty-six feet below the surface. The larger of them have probably served for hewing, and M. Boucher calls them hatchets. Close to these implements river and sea-shells were found, such as now only exist in the Nile and other rivers and lakes of the torrid zone; for instance, *cyrene fluminalis* and others. Fossil bones of rhinoceros, mammoths, hippopotami, and an extinct species of oxen, which have been much larger than those of our time, have also been met with there. Near this city, where the geological formation is nearly the same as in Abbeville, the diggings have had the same result. M. Albert Gaudry, who was charged by the Parisian Academy of Sciences to search for such implements, found in a few days nine flints shaped by man, together with shells, fossil bones of large oxen, of a horse and other animals. These hatchets do not at all resemble the cuneiform hatchets which have been found in ancient tombs. They are exclusively made of flint, are of very rude workmanship, and either longitudinal and acute, or oval. M. Boucher believes that they were made by knocking off small pieces by means of hard stones, just as the primitive knives, lances and arrows of the Germans. No polishing or grinding was attempted; the hatchets were either used with the hand as they were, or they were fixed in sticks or clubs. The wood has of course not been preserved, but on the larger specimens there are pegs, to the upper extremity of which the wood was evidently fixed. Narrow blades of stone were also found, which were probably used as knives, and stones with indentations which could be employed as saws.

It was at first always objected to M. Boucher, that the flint implements just described were only found at Abbeville and Amiens, but not in other places. M. Boucher replied to this, that it was not his fault, as indeed all his endeavours to excite colleagues of his to similar researches failed, until one of your countrymen who visited Abbeville, Mr. Prestwich, recollected that at the end of the last century shaped flints had been found close to fossil remains of animals, in the village of Hoxne, in Suffolk. He therefore,

immediately on his return to England, proceeded to Hoxne, where he examined the diluvium, and was informed by the working men that quite recently some flints had again been found there. He then commenced digging himself and found, about nine feet below the surface, not only bones of mammoths and oxen, but also flint hatchets which quite resembled those discovered by M. Boucher. Some months afterwards M. Goose, of Geneva, dug in the stone-pits of Grenelle, near Paris, which are quite similar to those of Abbeville; and found, at twelve to fifteen feet below the surface, two round hatchets, fifty knives and a few other pieces which had probably served as tops of lances and arrows.

It is, therefore, now impossible to doubt, that man was already in existence when the colossal mammoth, the hyæna, the tiger, and the gigantic deer lived in our latitudes. That the instruments then made by men are of very rude workmanship, is no matter of surprise, as even in later periods, hatchets were made which are only different from those mentioned above by being ground on whet-stones; besides, we must recollect, that in the torrid zone far less finished instruments are sufficient for man than in the moderate and cold climates. It is true that fossil bones of man have not yet been found; but that we may not despair of discovering such, is shown by the interesting circumstance, that quite recently a human skull was found in a limestone cave in the Neanderthal of Rhenish Prussia, which was totally unlike any other human skull ever found before. This skull has been described in Müller's *Archiv*, by Professor Schaaffhausen, of Bonn, who found it to be similar to that of the chimpanzee and gorilla; he ascertained that it belonged to the period at which the animals of the Deluge still existed, and that it was not a pathological malformation, but of a typical race character. Those of your readers who wish for some more information on M. Boucher's discoveries, will find it in his "Antiquités Celtiques et Antediluviennes" (with eighty plates); "Essais Philosophiques sur la Création;" and especially in the brochure, "De l'homme Antédiluvien et de ses Œuvres." Paris: 1860.—*Med. Times and Gaz.*

A SLIDE DOWN MONT BLANC.

A correspondent of the *London Medical Times* gives the following remarkable account: "A party ascending Mont Blanc, consisting of Messrs. H., B., and others, all first-rate mountaineers, with their guides, had slept out all night, and after breakfast Mr. B. left the others for a few minutes, being on a slight slope near a precipice. In returning to the party Mr. B. slipped, fell on his back, and then over. He slid down 1,500 feet, at an angle of 45° by measurement, and at a velocity of not less than sixty miles an hour, over frozen snow covered by little peas of ice like hail, and being brought up at a crevasse by the collected snow in his clothes; this owing to the arrangement of his dress at the time of the accident (his trowsers down), which no doubt saved him, by tying his legs together. Dr. Metcalf was sent for to St. Gervais late that night, and arrived there at 6 A.M., the following morning. He found Mr. B., a young gentleman of nineteen, in a state of collapse, wrapped in cold wet sheets, which were at once removed and restoratives given until reaction set in. Sensible; no alteration of the pupil; face looking like that of a man four or five days in the water, covered with blood, much swollen; skin off the right side of the nose and face; forehead abraded; hands burnt black on the backs, swollen, the fingers as if the ends were ground down on a coarse grindstone; nails all right; arms and elbows clear from wounds, but bruised from under the left arm to the ankle; the side scratched in every direction, as if with a sharp curry-comb, the right side not marked so high; the calf of each leg on the outside is fairly burnt black and dead, back of the calf unhurt; nates burnt off by the friction, and sides of the thighs the same, these parts being red or white. Not much pain in any part, and after reaction came on, but little wandering. Pulse from 0 got to 120, weak, thready, intermittent; stupor considerable; memory good; head not affected beyond what any severe shock would cause. Diarrhœa came on with much irritation, frequent micturition;

urine copious, dark, clear; thirst great; tongue white, pale. There was no blame attributable to any one. He fell at 7 A.M., and got to St. Gervais at 6 P.M., after a most perilous carriage on a portable sledge. No bone broken. Dr. Metcalfe has been unremitting in his attention, and informs me that he is doing well, and in a few weeks will probably be all right, and not marked or injured in any visible way. He is sensible and has been up already. This is a very interesting example of a severe 'brush-burn,' and the consequent shock of the system."

PINE-WOOL.

BY M. C. COOKE, F.R.S.

A new manufacture has recently sprung into existence on the continent of Europe which promises to be one of importance. It consists in the utilization of the acicular leaves or "needles" of coniferous trees, hitherto a waste substance. It was long ago known that pine leaves consisted of a bundle of tough fibrous material, agglutinated together, and bound into long rigid leaves by means of a resinous integument; but the practical development of this knowledge is but of recent date. Near Breslau, in Silesia, there are two establishments, both of which are worthy of notice. One of these is a factory where pine leaves are converted into a kind of cotton or wool; and the other, an establishment for invalids, in which the waters used in the manufacture of the pine wool are employed as curative agents. These establishments have both been erected, as we are informed, by M. Pannewitz, the discoverer of the process employed for obtaining the fibrous material for pine-leaves. This material he calls "woody-wool." It can be curled, felted or woven. We are not acquainted with the precise method employed by M. Pannewitz, but we have succeeded in obtaining a coarse brownish-yellow fibre by boiling pine-leaves in a solution of caustic alkali for a few hours; and after rinsing and boiling them again in alkaline liquor, and saturating them in a solution of chloride of lime, a whiter and finer substance, much resembling the pine-wool wadding now being imported from the Thuringer-wald. It is stated that by the mode of preparation employed by M. Pannewitz, the wooly substance acquires a quality more or less fine, or remains in its coarse state. In the former case it is employed as wadding, and in the latter as a stuffing for mattresses. The leaves may be stripped from the trees when quite young without injury, and a man may gather 200 lbs. per day.

The first application of this fibrous material consisted in its substitution for cotton with wool in the manufacture of blankets. Five hundred of these were sold to an hospital at Vienna, after a trial of several years they are now exclusively used. Amongst the enumerated advantages, it has been stated that no kind of insect will lodge in the beds, and that the odour has been found agreeable and beneficial. Since this period, the same kind of blankets has been adopted at the Penitentiary and some other institutions in Vienna, as well as in the barracks at Breslau. Its application for stuffing purposes has been no less successful; the cost being one third that of horsehair, and its resemblance so great, that it has been affirmed that when employed in furniture, the most experienced upholsterer could not tell the difference. When spun and woven, the thread resembles that of hemp, is very strong, and may be advantageously employed for many of the purposes for which hemp is used. From this "Forest-wool yarn" are now manufactured jackets, spencers, drawers, and stockings of every description; flannel and twill for shirts, coverlids, body and chest warmers, and knitting yarn. These manufactures are recommended for keeping the body warm without heating, and are very durable.

In the preparation of the wool, an ethereal oil is produced, which is at first green, but on exposure to sunlight becomes of an orange yellow tint, and when distilled colourless. It has been successfully employed as a curative agent. It burns in lamps like olive oil, and completely dissolves caoutchouc. The perfumers of Paris are stated to be employing it in considerable quantities. The liquid left by the decoction of pine-

leaves is employed in the medicinal bath. The membranous substance and refuse are compressed into blocks and used as fuel; from the resinous matter they contain, they produce sufficient gas for the lighting of the factory in which the production of these useful articles is carried on. The result of one hundred quintals of wool in combustible material is equal in value to six cubic metres of pine wood.

The Forest-wool ware manufactory at Remda in the Thuringer-wald advertises Forest wool, oil, spirits, wadding, and the other articles already enumerated. Whether these deserve or not all the high encomiums that have been passed upon them, it is nevertheless an important fact that a material before considered useless is now converted into articles of domestic utility and commercial importance.—*The Technologist*.

METHOD OF PRESERVING CUT FLOWERS.

Most persons are fond of preserving bouquets of natural flowers. Many methods of preservation have been proposed, but they have all more or less failed. The water in which they are placed becomes tainted, and is obliged to be changed at least once or twice a day, but even then the decay of the flowers, which begins very soon after their separation from the plant, is not materially prevented. The following method, which has completely succeeded, consists in putting a table-spoonful of powdered charcoal into the vase which contains the water destined to receive the flower or cut spray, and carefully placing the latter so that their lower extremities are beneath the liquid. This method has produced the most favourable results, for flowers may be thus preserved without any visible alteration—at least as long a time as in their natural condition—without the necessity of renewing the water or the charcoal.—*Mémorial des Pyrénées* and *Journal de Chimie Médecine*.

DANGER ARISING FROM THE EMANATIONS OF PLANTS.

CASE 1.—A most singular case of asphyxia has occurred at Lyons. Widow J— residing in the Rue du Mail, à la Croix-Rousse, bought in the Market of St. Jean some apricots for preserving, which she laid out on the floor of her room.

Her son J—, a pattern-drawer, going to his mother's room in the morning, after having knocked, was much surprised at receiving no answer. Suspecting some evil, he burst open the door, and found his mother almost insensible and giving no signs of life. A medical man, who was called in immediately, bled her copiously and she was soon restored. This circumstance is accounted for by the emanation of carbonic acid which had escaped during the night from the apricots which were deposited the evening before on the floor of the room.

CASE 2.—A lady, Louise B—, says the *Courier de Lyon*, the wife of one of the principal merchants of our town, had received on her birth-day a number of bouquets, which she had placed in her room by her servant.

The next morning, the latter, wishing some orders from her mistress, found her, on entering her room, in a fainting fit, and almost insensible. Thanks to the skill of one of our best practitioners, who hesitated not to attribute to the odour of the flowers the state of syncope into which she had fallen, Mad. B. was soon restored. Nevertheless, from that time, she has complained of neuralgic pains, which are occasionally intolerable.—*Journal de Chimie Médicale*.

THE TOUCH CURE.

A singular superstition exists in the northern provinces of France, that a person who is struck by lightning and not killed, possesses a miraculous power of healing by touch for a period of about forty days. A correspondent of the *Lancet* says that a little girl, eight years of age, at the village of Aubigny-au-Bac, was recently struck by lightning, but escaped with some trifling burns on the abdomen and legs. As soon as the news of the accident and escape transpired, all the lame, blind, and diseased of the vicinity flocked to her to be touched.

THE
British American Journal.

MONTREAL, NOVEMBER, 1861.

ACT TO PROVIDE FOR THE MORE GENERAL ADOPTION OF VACCINATION.

An act under the foregoing title obtained the sanction of the Governor General at the last Session of Parliament, and will begin to take effect from the first day of January next, in the cities of Quebec, Three Rivers, St. Hyacinthe, Montreal, Ottawa, Kingston, Toronto, Hamilton, and Sherbrooke. Its provisions are that "the father or mother of every child born in any of the said cities after the first day of January 1862, shall at some such appointed time within three calendar months after the birth of said child," *** "take or cause it to be taken to the medical practitioner at the appointed place in the ward in which the said child is resident," for the purpose of being vaccinated. But the third section provides that "within three calendar months after the passing of the Act, the council of each said City shall appoint a convenient place in each ward of said city for the performance of said vaccination," while by section the second provision is made, that the councils of the several towns alluded to should contract with some legally qualified and competent medical practitioners for the period of one year, for the vaccination of all poor persons, and at their own expense of all other persons, resident in said city. The Act lastly provides under section ninth, that the fee for successful vaccination shall be twenty five cents.

We think it at present unnecessary to enter more fully or minutely into the provisions of the Act, as we have in a preceding number given a synopsis of the whole Bill, and it has not been materially altered from the shape or manner in which it was first proposed. But we cannot help asking, what have the councils of the various cities specified been doing in the matter. Have they—has the council of this city made the necessary provisions for carrying out the law, by the selection of fit places wherein to perform the act of vaccination in the several wards of the city, a measure which in accordance with the Act should have been carried out "within three months after the passing of the Act," and the Act passed in May last.

Again the council of this city will have to nominate and appoint not fewer

than eight medical men, one for each ward into which the city has been divided. Has it thought of this duty, a duty which ought to be performed before the 1st January next.

Up to the present moment, we believe that the subject has not engrossed the attention of the authorities either of this city or those of any one of the other cities alluded to. Already we believe has one term of the Act been negatived, that of the selection of the places for vaccination within the various wards. It is not however too late to remedy this. But the time is now short in which to act, and we trust that some influential member not only of our own City Council, but of those of the other cities specified as well, will take the matter up, and endeavour to get the Act put into proper working order. The prevalence of Small Pox in the suburban parts of this city at present should rouse the members of our council to active exertions in this behalf, as a system of thorough vaccination, properly carried out is the only sure means of arresting the ravages of this, the most loathsome of all diseases. We trust that these remarks will also have their influence upon the members of the councils of the other cities mentioned in the Act; and thus having secured the full and beneficial operations of the Law in the cities, we apprehend that there will be encountered little opposition in the course of a few years, in another Parliament, in having its provisions extended to the country places. When a diminution in the amount of Small Pox and its mortality is exhibited in the cities, as connected with and dependant on the operation of the Act, there will be little difficulty in extending its provisions to the country. People can always appreciate the value of a proposal when they see its successful working. And such we have not the slightest doubt will be the case.

DR. N. LOVERIN.

We have been surprised during the last two months at witnessing the corners of our streets covered by large yellow placards, with the name of Dr. N. Loverin in immense capital letters with his address in Great St. James street. Equally astonished have we been in observing in several of the daily papers, preceding, (most proper place!) the space allotted to "Births, Marriages and Deaths," the following announcement:—

☞ "If you have a blood disease or weakness of any kind, call and see Dr. Loverin, No. 18, Great St. James Street."

And when the said Dr. N. Loverin first came to this city, he saw fit to announce himself as "an experienced physician." Who and what this Dr. N. Loverin is, and the extent of that experience upon which he apparently prides himself, we propose now to tell,—

A young man of the name of Nelson Loverin, graduated at McGill College in May 1855; and we are informed that the party above alluded to is the same Dr. N. Loverin who is adopting the unprofessional course of conduct to which we have called attention. Having graduated just six and a half year's ago, having never had since that time the charge of an Hospital, while the extent of his private practice, if he ever enjoyed much of that, may be estimated from the fact

of his having deserted it to come to this city, the amount of his professional "experience" may be most accurately gauged. But although deficient in medical experience, we think that he is experienced enough to know, like Tumblety, that the large mass of the people like to be duped. Having learned when at College the proneness of mankind to suffer deception, but only when sick, and taking advantage of that infirmity of the public mind, which induces sick men like drowning ones to catch at straws, he seizes his opportunity, and believing that among a population of 100,000 inhabitants, there must be many who will cheerfully part with their money upon the merest pretence, he has laid his traps accordingly, and awaits the results.

"The pleasure is as great
Of being cheated as to cheat."

As a graduate of McGill College, and the first who has prostituted its degree, we should like to ask Dr. N. Loverin, how such practices as he is pursuing comport with the solemn affirmation which he made in graduating that "*artem medicam caute, caste et probe exercitaturum.*"

The foregoing remarks are made far more in sorrow than in anger. We noticed some time ago that one of our evening daily papers alluded to his yellow placards in fitting terms of condemnation, and we imagined that a reproof from such a quarter would have been condemnation enough; but the offence is still repeated in defiance of enlightened public opinion, and we can only say, that we regret extremely, that the Diploma of the McGill College has been so very unworthily bestowed, or that it should have been disgraced in the hands of any of its holders. This however is we believe the first instance, and it should now become a question (if indeed the Governor's have not now the power), to dispossess a graduate of honors of which he does not appreciate the value, or, if he does, only to prostitute. In the September number of this Journal we took occasion to notice the proceedings of the Royal College of Surgeons of Ireland framed to meet cases like that of Loverin's. The resolution was adopted that "neither shall they nor any of them (the licentiates) seek for business through the medium of advertisements, or by any other disreputable method," and it compels the individual obtaining the licence to subscribe his name to a submission to the infliction of penalties in the event of his contravening it. If Loverin's disgraceful conduct is the first among our Licentiates, it may not be the last, and the question is not unworthy entertainment not only by McGill College, but by the other Universities and Colleges in Canada, whether the adoption of a like resolution might not prove of equal benefit in Canada, to repress and punish such transparent attempts at quackery, based upon their diplomas or degrees. The law enables us, under certain restrictions, to punish an unlicensed quackery, but it is unfortunately powerless to punish one who deserves it in a far higher degree, viz. him who is licensed, and who unable to secure an honest livelihood by the practice of his profession in an honourable and legitimate manner, avails himself of the immunities which he has secured, to descend to every low species of charlatanism, thus obtaining through the credulity of the sick what he could not obtain by the operation of their sound judgment.

THE LATE DR. JAMES SAMPSON.

A correspondent sends us the following obituary notice upon late Dr. Sampson of Kingston. The notice was prepared in haste to meet the present issue of the "British American Journal," and the dates may be somewhat inexact, but the facts have been carefully collated.

Dr. Sampson was born at Banbridge in Ireland, according to the Canadian Journal, in 1790, but in reality perhaps two or three years earlier than this date. He matriculated in Trinity College, Dublin, and served his time with an eminent Surgeon of that city. He was in London in 1808-9-10, and entered as a Student of the Middlesex Hospital. He pursued his studies with great intelligence and assiduity, and attracted the attention of Mr. Jiberns then, Senior Surgeon to the Hospital, who appointed him Clinical assistant. Soon after the establishment of a Military Hospital at Chelsea under Major General John Burnet, who had previously commanded one of the Military Districts in Ireland, a number of Hospital assistants were selected, and among them James Sampson. This was the commencement of his Military Medical career; the Hospital was named after the then commander in chief, Duke of York Hospital. The medical department of this date was under the direction of an Inspector of Hospitals, Dr. Price, and among the medical men attached to it were J. C. Carpue, F.R.S., afterwards a very successful teacher of Anatomy: G. J. Guthrie afterwards Surgeon General to the Army in the Peninsula, and William Price, a younger brother of Dr. Price, afterwards Apothecary General to the Army of occupation in France, and with this last gentleman the writer of the present notice, a dozen years later, became an articulated pupil, and from him the facts in regard to Dr. Sampson's early career were chiefly gleaned.

Among the Staff Surgeons at York Hospital the young Assistant was noted for his earnest devotion to Hospital duty, his fondness for *post mortem* examinations, and his skill and precision in performing the minor operations of Surgery. About this time many invalids were sent home *via* Malta and Gibraltar, suffering from Ophthalmia, contracted during the campaign in Egypt. One of the Staff Surgeons at York Hospital to which all invalids from the Army were sent, was Mr. Ware, afterwards the most eminent Surgeon Oculist of his day. Under this gentleman the young Hospital assistant acquired much knowledge and skill in the diagnosis and treatment of diseases of the eye, as under Messrs Carpue and Guthrie he had previously acquired a perfect familiarity with all the details of Military Surgery. In respect to Medicine the Inspector, Dr. Price, was a very able and learned physician, but a pedantic Welshman of the old School, fond of using the dead languages in his communications to his assistants, and of interlarding his clinics with Latin quotations. Dr. Sampson has often laughingly told the writer in referring to his early reminiscences, and to the facility with which the youthful mind was influenced by early associations, that he acquired his curt speech and didactic style from the blunt Englishman, Joberns, and his pedantry and love of Latin quotation from the pragmatic Welshman, Price.

While performing his duties as assistant at the Military Hospital, he also continued his attendance at the civil Hospital, and perfected himself in all the

branches of professional knowledge. Gifted with a rapid and intuitive perception, with excellent powers of memory, and a thorough knowledge of anatomy, a quick eye, and a steady hand, he profited by the ample opportunities afforded him, and in the dead-house at the York Hospital practised all the operations of Surgery on the dead subject, and became as he continued to within a short time of his decease, an expert, careful, and accomplished operator. His proficiency in operative Surgery was of the utmost value to him in the War of 1812 which found him in Canada, an assistant Surgeon to the 104th Regiment. In the attack upon Sacketts Harbor although still a very young man, he was selected to perform all the capital operations upon the wounded, aided by his two Seniors, whose familiarity with the operations of Surgery had not been so great. And in this, as in every public professional service, he acquitted himself with such distinction, as to establish his fame in Canada, as a competent and accomplished Surgeon.

If Dr. Sampson had continued in the Military Medical Service, and had survived the duties of the Service, he would long since have achieved the high rank of Inspector of Army Hospitals, and could have retired upon an ample pension. But he married early in life (his brother-in-law, Colonel Henry Cuiler, being at the head of a department of the same Military Service) and being importuned by his friends, and proffered a certain income if he would settle among them, he gave up his Military prospects, resigned his commission in the Army and settled down as a Medical practitioner in Kingston, where he continued to practice between 40 and 50 years, being at the time of his decease perhaps the oldest resident practitioner in the Upper Province. In Kingston Dr. Sampson at once took up the position to which his high professional attainments and fine social qualities entitled him. He continued to make the practice of his profession the study of his life, and his clear, strong masculine judgment, was so highly valued, that few cases of an obscure or difficult character occurred, without his being consulted upon them. His integrity and honor were never impeached, and his life was in a great measure free, from the petty professional quarrels and rivalries which embitter the lives of many.

Of his courage, promptitude and daring, an idea may be formed from his conduct during the American War when proceeding with a detachment of troops to Penetanguishene. The officer in command of the detachment was sick, and Dr. Sampson planned and himself executed a night attack in boats upon two armed American ships lying in Lake Huron, both of which he captured without losing a man.

During the Rebellion of 1837 he received the commission of Major, organized a large body of citizen soldiery when the garrison was denuded of regular troops, and put the city of Kingston in such an attitude of defence when she was threatened by a large band of sympathizers, that the attempt upon the town had to be abandoned.

Dr. Sampson has died full of years and of honors, leaving behind him a reputation both as a man and as a physician, which few of his compeers can hope to attain. In his early career he kept open house, and probably injured his private

fortunes by his liberality. He successively filled the offices of Mayor of the City, Chairman of the Court of Quarter Sessions, and President of the Medical Faculty of Queen's College. He was an Honorary Graduate of the University of McGill College, a member of the Medical Board of the Upper Province, and Surgeon to the Provincial Penitentiary, the duties of which last office he discharged faithfully and efficiently for twenty six years.

Dr. Sampson supposed himself to be suffering from stricture of the descending colon. A few years ago he met with a severe fall, which produced partial lameness. His health and strength gradually declined. But the mind remained clear. Two months ago he told the writer that he thought his time approaching, and wished to see all his affairs arranged. On a previous occasion he spoke of his objection to all kinds of display at funerals, and quoted the sentiment of the poet as applicable to himself.

——— “ And so, forgotten, let me live,
And, unlamented, let me die,
Steal from the world, and not a stone,
Tell where I lie.”

His wish could not be granted. He filled too large a space in the public mind to be allowed to pass away without notice. His obsequies on the 12th were attended by a large proportion of the population of Kingston, including Magistrates, Military officers, ministers of all denominations, the professors and students of Queen's College in costume, the members of his profession, his former colleagues, and large numbers of personal friends. Dr. Sampson was a good man, and in his walk in life a great man, and an ornament to his profession. He was possessed of fine social qualities, just, generous, and hospitable. He never during his long life in Canada appears to have made an enemy. He is known to have sacrificed much for his friends. His good deeds and his services to our common humanity, will live in men's memories, long after his poor frame has returned to dust.

DR. WILSON AND THE QUACKS.

We have received two or three numbers of the *Perth Standard*, containing letters of Dr. Wilson of that city, in which he has been defending himself and legitimate medicine against attacks of a personal character, made by certain quacks in his neighbourhood. Dr. Wilson's letter, contained in the number of November 1, is a most able reply to the pretensions of the Thompsonians and the Homœopaths, but we cannot help saying in sorrow *cui bono*. The Legislature in its wisdom has deemed it fit, proper, and necessary to legitimize the practice of these basest of impositions, and therefore, in point of law, they stand upon an equal footing with himself: and for this the Profession of U. C. has to thank its members, and to none are these impostors more indebted than to Dr. Hermanus Smith, one, we regret to say, belonging to our own profession, and for whose advocacy of the claims of these parties we can only plead the palliative excuse of senility. The “deed however is done,” and if the profession in Upper Canada is at all true to itself, it should endeavour at the

ensuing Parliament, not only to secure an act of incorporation for itself, but at the same time to abolish the acts which have given a legal status to the Homœopaths and the Thompsonians or Eclectics, as they arrogantly term themselves. Of one thing the profession in Upper Canada may be assured, that unless some steps are taken during the next Parliament to effect these objects, it will become the duty of the profession of the Lower Province to obtain the abolition of the act which entitles the Licentiates of the one province to practice in the other, or more technically the act 4 and 5 Vic. cap. 41. This will have to be done in self defence, and we feel assured that there is not a right-minded practitioner of the Upper Province who can raise an objection to such a proceeding.

 DR. CADWELL.

MALPRACTICE CASE IN CHICAGO—VERDICT OF \$10,000, AGAINST DR. CADWELL.

A case of considerable interest and importance has been before the Superior Court, Judge Goodrich presiding, for several days past, in which a Miss Julia Farrell was plaintiff, and Dr. Cadwell, an eye and ear doctor of this city, defendant. The suit was predicated upon the eye of the defendant. The facts in the case are substantially as follows: The plaintiff was a servant girl at the City Hotel, and averred in her declaration that, on the 13th of July 1860, she went to Dr. Cadwell to have a white spot upon her left eye removed. This spot was a scar caused by an ulcer in her early childhood. She averred that the defendant assured her that he could remove the spot and make the eye look as well as the right one; that the operation would not hurt her; that it would not impair the condition of the right eye; and that she could engage in her usual employment in six or seven days. She consented to the operation, and advanced the physician \$30. During the operation he transfixed the spot with a needle, drew it out and cut it off, thereby letting out the aqueous humours of the eye and destroying its sight. Subsequently she took cold, and her right eye became inflamed and painful, and he poured into it certain destructive and inflammable drops, thereby destroying its sight also. She averred that his treatment was unskilful, and that he did not use proper care and diligence, and that, for want of such she took cold and thereby lost her sight, and that in the operation upon the left eye, he knew that he could not remove the spot without the loss of the eye. The defendant, on the other hand, set forth that the plaintiff came to him for the express purpose of having the left eye so treated that an artificial eye might be inserted, and that her loss of sight was solely attributable to her own negligence. A critical examination of the injured organ was held before the jury, during the trial, in which several of our best and most experienced surgical professors took part, and it undoubtedly resulted unfavourably to the defendant's interests, otherwise the verdict would have been more to his liking. The case was given to the jury, after a long and ably conducted examination on Wednesday night, with directions to return a sealed verdict, which was done yesterday morning, fixing damages for Miss Farrell at \$10,000. A motion for a new trial and an arrest of judgment was immediately made by the counsel for the defendant.—*Chicago Times*.

Dr. Cadwell is well known in this city, which he left for reasons best known to himself. In fact we well remember that he gave himself out as having been connected with an Ophthalmic Hospital in New York, which had no existence save in his own imagination, a statement which we felt it our duty to expose in a number of the old series of this Journal.

The case above alluded to would appear to have been one of Albugo, or more probably Leucoma, for the latter of which Dieffenbach has recommended excision. This appears to have been the operation which he attempted to perform, and he

bungled the operation by opening the cornea, and letting the aqueous humour escape. The wonder to us is that the lens, and vitreous humour did not follow. We presume that the medical men called on the trial took the same view as we do, as they all seem to have given their evidence in favour of the plaintiff, and that most righteously. It should be a lesson to him and all others of his stamp, that they should not meddle with matters which they do not fully understand, and possibly the verdict rendered is the best lesson upon the anatomy of the eye, and especially upon that of the cornea, which could be read to the operator.

"THERE IS NOTHING LIKE LEATHER."

Sir James Murray in the Dublin Medical Press has a paper in which after certain remarks in opposition to the employment of Diluted Alcohol in the preparation of the various Tinctures, observes that his highly carbonated Fluid Magnesia and Camphor would form an admirable substitute. He states that by simple cold infusion, the foregoing liquid is fully capable of extracting the medicinal qualities of roots, leaves, seeds, and even gum resins. All this may be, but we apprehend that Sir James is desirous of obtaining a wider field for his preparations, and thus securing a greater sale.

TORONTO MEDICO-CHIRURGICAL SOCIETY.

The Toronto Medico-Chirurgical Society met, after the summer recess, at their rooms in the Temperance Hall, on the 8th October. Dr. Thorburn, Second Vice President, occupied the chair.

It was moved and adopted that the meetings of the Society be held every fortnight instead of monthly, as hitherto. After the despatch of business, a paper was read by Dr. Kerr, on the use of certain Canadian plants in the treatment of diseases of the mucous membranes.

After a general and animated discussion, the meeting broke up.

The first fortnightly meeting of the Society was held in their rooms in the Temperance Hall, on Tuesday, October 22. Dr. Wright, first Vice President, was called to the chair.

The ordinary business of the Society being disposed of, Dr. O'Dea read a paper "On the importance of the part taken by the Kidneys in Scarlatina." A discussion of considerable interest ensued, and the Essayist having received a vote of thanks, the meeting dissolved.

On the 5th November, the Society met again in their rooms. Dr. Wright presided. Dr. Thorburn favoured the members with the notes of a case of Chronic Gastritis, and at length perforation of the stomach, in which death ensued twenty hours after the rupture, from abdominal collapse. After a lively discussion, in which all present took part, the meeting separated.

BOTANICAL SOCIETY OF CANADA.

This society we are pleased to observe, still continues its operations with great and unabated vigour. As a proof of the interest, taken in it at a distance, we were much gratified, by receiving from the indefatigable secretary, Dr. Lawson, a short time ago, a list of one hundred and thirteen plants, representative of no less than thirty-seven natural families, a donation to the garden from Prof. Asa Gray, of Harvard College,

Cambridge, Mass. The donation is rich in species of the Compositæ, Leguminosæ and Scrophularinæ, while the Campanulacæ, Onagracæ and Labiata are also well represented. We would most cheerfully have published the list of the plants in detail did our space permit; this however we find to be impossible. As however the Botanical Society is now fairly started, we hope to see it enjoy a long and prosperous career of usefulness.

 EDITORIAL SUMMARY.

The Cork Trade of Bordeaux.—There are at present in Bordeaux twenty-five cork factories, employing seventy-five workmen, using annually 3,396,846 lbs. of cork bark, and producing about 10,000,000 corks. 90,000,000 ready-made corks are obtained from neighbouring places, Neac, Bayonne, and Provence. The cork trade of Bordeaux, therefore, may be estimated at 100,000,000 corks annually, worth about £156,333. Two-fifths of this quantity are exported to the French colonies, the United States, Chili, India, &c.; three-fifths are used in Bordeaux, at the average price of £1 4s. per thousand. These corks are divided into four classes—namely, the extra fine, used for champagne bottles, and sold for from £2 to £4 16s. the thousand; the very fine used for bottles of wine of the first quality, and sold for from £1 4s. to £2 the thousand; the fine, used for bottles of wine of the second quality, and sold for from 16s. to £1 4s. the thousand; and the common corks, used for bottles of common wine, and sold for from 2s. 4d. to 16s. the thousand. Nearly all of them are made by hand. There are so many difficulties and disadvantages connected with their manufacture by machinery that the use of machines is unprofitable. One class of workmen cut them into lengths, another turns them, and women are employed to separate them into the different classes named above. One cutter can prepare work for five turners, and one turner can make on an average 1200 a day. The cutters are paid from 3½d. to 4½d. per thousand, and the turners from 1s. 2d. to 1s. 6½d. per thousand, that is about 1s. 6d. a day.—*Mechanics' Magazine.*

Tobacco.—Man, they say, is the only cooking animal, so is he the only smoking one, and if so, why?—

“Recently at a meeting of the Society of Education at Rouen a paper was read by Dr. Dumesnil on tobacco and the effects its use, of which the following is an abstract:—“The custom of smoking is spreading through the whole world. The tobacco producing countries have the greatest difficulty in providing for local wants. In America the consumption augments more rapidly than the supply. According to late statistics, the quantity of tobacco annually used in the New World annually is in weight equal to the bread consumed by ten millions of individuals in England. England, a country which does not produce tobacco, yearly consumes 30,000,000 lbs. of that plant drawn from America, and during the last ten years her consumption has increased one-fourth. In Hamburg, the population of which is only 150,000 as many as 40,000 cigars are consumed per day. In Denmark the annual average consumption is 4 lbs. per head for the whole population. In Holland the proportion is still higher. In Austria the cultivation of the tobacco plant occupies 100,000 acres of good land. In 1854, the consumption of tobacco in the whole world amounted to 506,000,000 lbs., being an average of 9 oz. for each person. Calculating that tobacco contains on an average 3 per cent. of nicotine, it will be seen that there are annually consumed on the globe 15,180,000 lbs. of a poison of which a few drops are sufficient to cause death.”.—*Dublin Medical Press.*

Deaths of Dr. Cusack of Dublin and Dr. Meade of Queenstown.—The former gentleman, who died at the age of 74 years, was one of the original founders of the Park Street School of Medicine, Dublin. In 1850 he took the degree of M.D. in the University of Dublin. In 1852 he was elected to the Professorship of Surgery in the University which was founded that year, and in 1858, on the death of Sir Philip Crampton, he received the appointment of Surgeon-ordinary to the Queen in Ireland, a position which

his talents eminently qualified him to fill. In the same year he was elected for the third time President of the Irish College of Surgeons. Dr. Cusack contributed many most important papers to medical literature.

Dr. Meade was Vice President of the Cork Medical Protection Association, and was universally esteemed in the city in which he dwelt.

BOOKS, &c., RECEIVED.

MEDICAL JURISPRUDENCE, by Alfred S. Taylor, M.D., F.R.S. &c., fifteenth American from the seventh and revised London Edition. Edited with additions by Edward Hartshorn, M.D., Surgeon to the Pennsylvania Hospital, Philadelphia: Blanchard & Lea; Montreal: Dawson & Son, 1861, 8vo. pp. 714—Price—.

PRINCIPLES AND PRACTICE OF OBSTETRICS, by Gunning S. Bedford, A.M., M.D., New York; Samuel S. & W. Wood; Montreal: Dawson & Son, 1861, 8vo. pp. 731—Price \$3.25.

LECTURES ON THE DISEASES OF WOMEN, by Charles West, M.D., Second American from the second London Edition. Philadelphia: Blanchard & Lea; Montreal: Dawson & Son, 1861, 8vo. pp. 483—Price \$2.50.

REPORT OF A COMMITTEE OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT, on the alledged dangers which accompany the inhalation of the vapour of Sulphuric Ether—Boston 1861—pht—pp. 36.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

At London, C. W., on the 23rd October, the wife of Dr. Brown, of a daughter.

In Toronto, on the 22nd October, the wife of Herbert F. Tuch, M. D., of a daughter.

At the Presbyterian Manse, Tilbury East, County of Kent, C. W., on the 11th October, the wife of James Miller, M.D., of a son.

In this city, on the 11th October, the wife of Dr. Wm. Hamilton Taylor, of a son.

At Quebec, on the 17th September, the wife of Dr. Selley, of a daughter.

MARRIAGES.

On the 8th October, at Woodford, the residence of the bride's father, by the Rev. L. Merrill Miller, Thos. Baird, Esq., of Ormiston, C. E., to Isabella, daughter of Geo. H. Phillips, M.D.

At No. 4 Brougham Street, Greenock, Scotland, on the 17th of October, by the Rev. J. M. McCulloch, D. D., Francis Wayland Campbell, M.D., L.R.C.P., Lond: of Montreal, Canada, son of Rollo Campbell, Esq., Proprietor of the *Pilot*, to Agnes Stuart, youngest daughter of Alexander Rodger, Esq., and grand-daughter of the late Walter Washington Buchanan, M.D., of "Bagatelle Villa" Greenock, and formerly Professor of Midwifery, Columbia College, New York.

On the 24th inst, at St. John's church, Port Rowan, by the Rev. W. Wood, Joseph M. Tweedale, M.D., of Lobo, county of Middlesex, to Maria C., daughter of William H. Stephenson, Esquire, of Port Rowan.

In Montreal, on the 8th instant, by the Rev. A. F. Kemp, A.M., Duncan McGregor, M.D., Holland, County Grey, C. W., to Jessie Grant, eldest daughter of Peter C. Moir, Esq., of this city.

In Quebec on the 14th instant, by the Lord Bishop of Quebec, assisted by the Rev. G. V. Houseman, James Bell Johnston, M.D., of Sherbrooke, to Mary Ann Frances, second daughter of the late Charles Wyatt, Esq., late of London, England.

DEATHS.

On the 20th October, suddenly, at Waterbury, Conn., in the 28th year of his age, Wm. Pearce, third son of Dr. T. J. Howard, of St. Andrews, Argenteuil, C.E.

At Sante, District of Quebec, on the 15th instant, Georgiana, eldest daughter of the late Robert Allsop, Deputy Assistant Commissary General, Quebec, wife of Geo. Alfred Allsopp, M.D., Cap Sante, aged 57 years.

At the Presbyterian Manse, Tilbury East, County of Kent, C.W., on the 12th October, Jane, wife of James Miller, M.D., in the 44th year of her age.

In New Haven, Connecticut, on the 8th October, Eli Ives, M.D., aged 84 years, the venerable Emeritus Professor of Materia Medica, in Yale College.

In Kingston, on the 9th Nov., James Sampson, M.D., in the 73rd year of his age.

STATISTICS OF MORTALITY IN THE CITY OF MONTREAL.

From Returns of Interments in the Mount Royal Cemetery, Recapitulation for the year 1860.

By G. E. FENWICK, M.D.

Disease.	No.	Stillborn.	Under 2 Years.	2 to 8 Years.	8 to 15 Years.	15 to 20 Years.	20 to 30 Years.	30 to 40 Years.	40 to 50 Years.	50 to 60 Years.	60 to 70 Years.	Over 70 Years.	Not known.	Centre.	West.	East.	St. Antoine.	St. Anns.	St. Lawrence.	St. Louis.	St. James.	St. Mary.	Country.	
Stillborn	40	40																						
Small Pox	23		11	7	1										1		11	13	5	2	4	1	3	
Measles	7		3	4														2			2	2	1	
Scarlet Fever	34		8	18	6		1							1	1		6	16	4	2	2	2		
Fever	6		1	1	1	1	1	2	1	1							2	2	5	2	2	3	2	
Convulsions	18		18													1								
Hydrocephalus	40		24	14	2									1	2	1	14	8	4	3	3	1	3	
Inflammation Brain	1						1										1							
Congestion of Brain	5			2	1		1	2							1			2	1					
Tubercular disease.	3		1				1	1									1			2				
Softening of Brain.	1								1										1					
Mania	1																						1	
Apoplexy	17							7	4	3	2	1			1		3	4	3	2	2		2	
Paralysis	5										4	1				1	1	1	1				1	
Epilepsy	2									1	1				1		1							
Delirium Tremens.	1							1												1				
Disease of Spine	6		1	2	1				1		1						1	1	2	1	1	1	1	
Hooping Cough	24		24											1		1	13	3	1	2	1	1	1	
Croup	17		8	9											1		2	4	1	3	2	2	1	
Inflammation Lungs	52		18	8		1	3	8	2	6	2	4		1	2	1	12	4	11	11	5	1	4	
Consumption	91		9	4	4	5	26	23	14	6				3	1	1	17	15	22	16	3	4	9	
Disease of Heart	15						2	2	4	4	1	2			1			4	1	4	3	1	1	
Asthma	3									2	1						1		1		1			
Hæmorrhage	1										1					1								
Anæmia	1								1														1	
Dentition	9		9														1	2	3	2		1		
Aphthæ	2		2															1			1			
Diphtheria	1			1													1							
Infantile Cholera.	28		28												1	1	8	6	4	2		1	5	
Sporadic "	2						1	1										1	1					
Diarrhœa	7		4					1		1							1	1	2	3				
Dysentery	1								1						1									
Inflammation Bowels	3		1					1	1							2	1							
Marasmus	1		1														1							
Stricture of Bowel.	1						1																	
Disease of Liver	7							1	2	1	2	1					1		3	2		1		
Dropsy	12						3		3	2		4			1			2	4	4			1	
Disease of Kidney	1						1										1							
Disease of Bladder.	1		1																				1	
Childbirth	4						1	1	2								1	1				1	1	
Puerperal Fever	1								1								1							
Erysipelas	4		2			1			1								2		1		1			
Cancer of Stomach	2									2									1				1	
Rupture	1								1									1						
Accidental	22			3		2	4	2	2	1	3	1	4			1	2	4		4		1	10	
Not known	21		3	1			1	4	4	1			7		1		4	4	1	3		2	6	
Tumour	2						1	1											2					
General debility	3							2		1									1	2				
Senile "	29										5	24			2	1	1	7	3	4		1	6	4
Infantile "	35		35													1	10	1	8	4	2	5	4	
Total	616	40	213	72	16	10	51	62	46	33	24	38	11	11	15	16	127	123	102	78	33	44	62	

Of the above 314 were Males, 297 Females, and 5 not known.

STATISTICS OF MORTALITY IN THE CITY OF MONTREAL.

From Returns of Interments in the Roman Catholic Cemetery, Recapitulation for the Year 1860.

Disease.	No.	Under 1 mon.	Under 2 years	2 to 8 years.	8 to 15 years.	15 to 20 years	20 to 30 years	30 to 40 years	40 to 50 years	50 to 60 years	60 to 70 years	Over 70 years	Not known.	Centre.	West.	East.	St. Antoine.	St. Ann.	St. Lawrence.	St. Louis.	St. James.	St. Mary.	St. Charles.	St. Grises.	Country.
Small Pox.....	131	23	98	5	3	1	1	1	1	1	1	1	1	7	9	26	18	4	9	25	22	1	10		
Measles.....	25	4	21	1	1	1	1	1	1	1	1	1	1	2	2	7	1	3	4	5	1	1	1	1	
Scarlet Fever.....	31	2	26	3	1	1	1	1	1	1	1	1	1	2	1	9	9	4	3	1	1	1	1	2	
Fever.....	82	3	36	14	6	9	6	3	3	2	1	1	1	11	1	3	15	7	5	8	15	4	1	12	
Convulsions.....	9	4	4	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	2	3	3	3	1	1	
Hydrocephalus.....	11	2	8	1	1	1	1	1	1	1	1	1	1	2	1	2	1	2	3	3	3	1	1	1	
Inflammation Brain.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Congestion of "	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Apoplexy.....	12	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	3	
Paralysis.....	29	1	1	1	1	1	1	1	1	1	1	1	1	7	1	1	6	4	4	2	2	3	1	1	
Epilepsy.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Delirium Tremens.	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tetanus.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mania.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Disease of Nerves..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Hooping Cough...	59	27	32	1	1	1	1	1	1	1	1	1	1	1	3	12	6	10	4	6	8	1	9	9	
Croup.....	62	13	47	2	1	1	1	1	1	1	1	1	1	1	1	5	15	6	11	7	9	1	7	7	
Disease of Throat..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Congestion Lungs.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Inflamm'n Lungs	46	3	3	3	7	6	9	10	4	1	1	1	1	8	1	7	8	4	3	4	3	3	1	8	
Consumption.....	206	2	9	25	65	48	28	22	7	1	1	1	1	35	3	4	33	20	20	25	23	20	1	22	
Asthma.....	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Disease of the Heart	20	1	1	1	1	1	1	1	1	1	1	1	1	3	1	5	1	1	1	2	4	4	1	1	
Dentition.....	115	113	2	1	1	1	1	1	1	1	1	1	1	1	1	1	20	15	13	11	18	22	1	14	
Diarrhoea.....	20	8	7	1	1	1	1	1	1	1	1	1	1	1	1	2	4	2	4	4	1	1	1	1	
Dysentery.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cholera.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Disease of Liver...	9	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	1	2	1	2	1	2	1	1	
Dropsy.....	53	8	3	1	1	1	1	1	1	1	1	1	1	13	2	10	3	8	8	4	1	1	1	3	
Gravel.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
Childbirth.....	34	4	15	13	2	1	1	1	1	1	1	1	1	1	1	5	8	5	5	4	3	3	1	3	
Worms.....	9	2	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Inflammation.....	24	2	1	1	3	7	3	5	2	1	1	1	1	2	1	4	6	2	2	4	1	1	1	2	
Erysipelas.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Gangrene.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Charbon.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Abscess.....	9	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cancer.....	18	3	3	3	5	4	3	3	4	3	3	3	3	4	1	2	4	1	2	1	3	1	1	1	
Rheumatism.....	13	1	1	1	2	3	1	4	1	1	1	1	1	3	1	3	2	1	3	1	1	1	1	1	
Accidental.....	26	1	6	4	5	6	2	1	1	1	1	1	1	1	1	1	3	4	6	3	2	1	1	6	
Suicide.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Hæmorrhage.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sudden Death...	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
After Surg'l oper'n	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Strangula'd Hernia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Senile Debility...	107	1	1	1	1	1	1	1	1	1	1	1	1	12	1	2	11	4	8	24	19	13	7	6	
Infantile Debility..	1344	596	744	4	1	1	1	1	1	1	1	1	1	5	6	17	145	132	73	137	144	115	442	128	
Total....	2557	596	947	314	54	45	128	113	82	94	88	95	1	133	18	44	342	276	191	290	311	247	454	251	

Of the above 1243 were Males and 1314 Females.

RECAPITULATION.

TABLE SHOWING THE MONTHLY PREVALENCE OF DISEASE.

(From returns of interments in the Mount Royal Cemetery for the year 1860.)

Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Stillborn.....	6	2	5	3	1	2	5	4	...	2	3	7	40
Small Pox.....	...	...	...	1	1	2	3	1	4	3	4	4	23
Measles.....	...	1	1	1	1	2	1	...	...	...	...	...	7
Scarlet Fever.....	2	2	1	7	5	5	5	3	3	...	...	1	34
Fever.....	1	...	...	...	...	...	1	1	1	2	...	2	8
Convulsions.....	2	1	1	1	1	3	1	4	2	1	7	1	18
Hydrocephalus.....	4	3	2	4	3	3	1	6	3	5	4	2	40
Inflammation of Brain.....	...	...	...	...	1	...	...	...	...	...	...	...	1
Congestion of Brain..	1	...	1	2	1	...	...	...	...	...	...	...	5
Tubercular Disease.....	...	...	...	3	...	...	...	...	...	...	...	...	3
Softening of Brain.....	...	...	1	...	...	...	...	...	...	...	...	...	1
Mania.....	...	1	...	...	...	...	...	...	...	...	...	...	1
Apoplexy.....	...	1	4	1	2	1	...	2	3	1	1	1	17
Paralysis.....	1	...	...	...	...	...	...	1	1	...	...	2	5
Epilepsy.....	...	...	...	1	...	...	...	1	...	...	...	...	2
Delirium Tremens.....	...	...	...	...	...	1	...	...	...	...	...	...	1
Disease of Spine.....	1	...	...	...	2	2	...	...	...	1	...	...	6
Hooping Cough.....	5	7	4	2	2	2	...	1	1	...	...	...	24
Croup.....	1	...	...	3	2	1	1	1	2	2	2	2	17
Inflammation of Lungs.	5	5	10	7	1	4	1	4	4	3	2	6	52
Consumption.....	10	12	8	13	4	7	2	13	8	6	2	6	91
Disease of Heart.....	...	3	1	1	1	1	...	2	1	1	4	...	15
Asthma.....	...	...	1	...	...	...	...	1	...	1	...	...	3
Hæmorrhage.....	...	...	...	...	...	...	...	...	1	...	...	...	1
Anæmia.....	...	...	...	...	...	...	...	...	...	...	1	...	1
Dentition.....	...	...	...	1	...	...	5	1	...	...	1	1	9
Aphthæ.....	...	...	...	...	...	1	...	1	...	...	...	...	2
Diphtheria.....	...	...	...	...	...	...	...	...	...	...	...	1	1
Infantile Cholera.....	...	...	...	...	...	12	13	3	...	...	...	...	28
Sporadic Cholera.....	...	...	...	...	...	...	2	...	...	...	...	...	2
Diarrhœa.....	...	...	...	1	...	...	1	2	3	...	...	...	7
Dysentery.....	...	...	...	...	...	...	1	...	...	...	...	...	1
Inflammation Bowels..	...	...	...	...	...	...	1	1	...	1	...	...	3
Marasmus.....	...	...	...	...	...	...	...	...	...	...	1	...	1
Stricture of Bowels... 1	1	...	...	...	...	...	...	...	...	...	...	...	1
Disease of Liver.....	...	1	...	...	1	...	2	2	...	...	...	1	7
Dropsy.....	3	3	...	1	...	1	1	...	2	...	1	...	12
Disease of Kidney.....	...	...	...	...	1	...	...	...	...	...	...	...	1
Disease of Bladder.....	...	...	...	...	...	...	...	...	1	...	...	...	1
Child-birth.....	1	1	...	1	...	...	...	...	...	1	...	...	4
Puerperal Fever.....	...	1	...	...	...	...	...	...	...	...	...	...	1
Erysipelas.....	1	...	1	...	...	...	...	...	1	...	1	...	4
Cancer of Stomach.....	...	1	1	...	...	...	...	...	...	...	...	...	2
Rupture.....	...	...	...	...	1	...	...	...	...	...	...	...	1
Accidental.....	1	3	...	...	3	1	3	6	2	2	1	...	22
Tumour.....	1	...	...	...	...	...	1	...	...	...	...	...	2
Not Known.....	3	4	2	1	3	1	1	1	...	4	1	...	21
General Debility.....	...	...	...	1	2	...	...	...	...	...	...	...	3
Senile Debility.....	3	1	2	3	2	3	3	4	1	5	...	2	29
Infantile Debility.....	...	7	3	1	2	4	7	5	1	1	...	4	35
Total.....	53	60	49	60	43	59	62	70	45	43	29	43	616

RECAPITULATION.

TABLE SHOWING THE MONTHLY PREVALENCE OF DISEASE.

(From returns of interments in Roman Catholic Cemetery for the year 1860.)

Disease.	January,	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Small Pox.....	1	3	3	....	10	13	17	18	10	9	16	31	131
Measles.....	11	4	4	2	1	1	....	2	....	....	....	....	25
Scarlet Fever.....	4	3	....	1	4	7	10	....	1	1	....	....	31
Fever.....	....	6	7	12	5	2	11	7	11	10	6	5	82
Convulsions.....	....	2	1	1	1	1	1	2	....	....	....	....	9
Hydrocephalus.....	....	....	....	2	....	....	2	2	....	3	2	....	11
Inflammation of Brain.....	....	....	....	....	1	1	....	....	....	....	....	....	1
Congestion of Brain.....	....	....	1	....	1	....	....	....	....	....	....	....	2
Apoplexy.....	2	....	....	1	....	1	3	....	3	1	....	1	12
Paralysis.....	3	....	2	2	2	4	4	1	1	5	1	4	29
Epilepsy.....	....	....	....	1	....	....	....	....	....	....	....	....	1
Delirium Tremens.....	1	....	....	....	....	....	1	....	1	1	....	....	4
Tetanus.....	....	....	....	....	1	....	....	....	....	....	....	....	1
Mania.....	....	....	....	1	....	....	....	....	....	....	....	....	1
Disease of Nerves.....	....	....	....	....	....	....	....	....	....	....	....	1	1
Hooping Cough.....	3	7	23	12	6	2	1	1	3	....	....	1	59
Croup.....	4	5	10	8	1	3	....	3	6	7	9	6	62
Disease of Throat.....	1	....	....	....	....	....	....	....	....	....	....	....	1
Congestion of Lungs.....	....	....	1	....	....	....	....	....	....	....	....	....	1
Inflammation of Lungs.....	4	3	5	5	7	2	6	6	2	....	3	3	46
Consumption.....	27	14	14	20	21	13	18	19	12	14	22	12	206
Asthma.....	1	....	1	....	....	....	1	1	....	1	3	....	8
Disease of Heart.....	....	1	....	2	2	1	3	2	2	2	2	3	20
Dentition.....	1	7	1	8	8	15	30	20	10	6	5	4	115
Diarrhœa.....	....	....	....	....	....	1	10	5	3	1	....	....	20
Dysentery.....	....	....	....	....	....	....	1	....	....	....	1	....	2
Cholera.....	....	....	....	....	....	....	1	....	....	....	....	....	1
Disease of Liver.....	1	....	....	1	1	1	....	1	....	1	1	2	9
Dropsy.....	5	5	6	5	4	4	3	....	6	7	5	3	53
Gravel.....	....	....	1	....	1	....	....	....	....	1	....	....	4
Child-birth.....	5	1	2	....	1	3	2	2	4	4	3	7	34
Worms.....	1	2	....	2	2	....	....	....	....	....	1	1	9
Inflammation.....	....	....	....	....	....	2	....	....	1	6	7	8	24
Erysipelas.....	....	....	1	....	....	....	....	1	....	....	....	1	3
Gangrene.....	....	....	2	....	....	....	....	....	....	....	....	....	4
Charbon.....	....	....	....	....	....	1	1	....	....	....	....	....	2
Abscess.....	1	1	1	1	2	....	1	....	....	1	....	1	9
Cancer.....	2	1	1	1	1	1	3	2	2	1	2	1	18
Rheumatism.....	2	1	1	2	2	....	2	....	1	1	....	1	13
Accidental.....	4	....	2	2	....	2	2	5	2	5	....	2	26
Suicide.....	....	....	....	....	1	....	1	....	....	....	1	....	3
Hæmorrhage.....	....	....	....	....	....	1	....	....	....	....	....	2	3
Sudden Death.....	....	....	....	....	....	....	1	1	1	3	1	....	7
Surgical Operation.....	....	....	....	....	....	....	1	1	....	....	....	....	2
Strangulated Hernia.....	....	....	....	....	....	....	....	1	....	....	....	....	1
Senile Debility.....	6	14	8	10	10	9	12	5	13	3	9	8	107
Infantile Debility.....	83	78	84	81	126	198	210	157	108	80	70	69	1344
Total.....	173	158	182	183	221	289	359	265	204	174	171	178	2557

RECAPITULATION.—TABLE, SHOWING THE NUMBER OF DEATHS IN EACH MONTH, FROM RETURNS OF INTERMENTS FOR THE YEAR 1860.

IN THE MOUNT ROYAL CEMETERY.

Months.	No.	Male.		Female.	Not known.	Still Born.	Under 2 years.	2 to 8 years.	8 to 15 years.	15 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	Over 70 years.	Not known.	Centre.	West.	East.	St. An- toine.	St. Ann's.	St. Law- rence.	St. Louis.	St. James.	St. Mary.	Scours.	Grises.	Coun- ty.
January.....	53	17	36			6	13	4	1	1	10	3	3	2	2	4	4				1	10	18	11	5	3	2		3
February.....	60	29	31			2	17	3	2	2	8	11	4	4	3	5	1				2	15	14	12	6	2	1		8
March.....	49	36	10		3	5	15	2	2	4	6	3	4	2	3	3	1				3	10	9	11	6	1	2		6
April.....	60	29	29		2	3	16	12	2	1	6	4	7	4	1	4					3	16	10	13	13	1	1		1
May.....	43	23	20			1	10	8	3	3	3	6	3	4	2	2	1				1	8	5	10	6	1	4		5
June.....	59	28	31			2	31	9	1	1	3	6	4	1	2	2	1				1	10	12	8	8	6	7		6
July.....	62	30	32			4	33	6	1	1	5	4	4	2	3	3	1				1	10	13	14	5	5	6		6
August.....	70	49	27			4	28	9	2	2	5	4	5	6	3	3	1				1	10	12	8	6	5	6		6
September.....	45	22	23			3	19	5	2	2	4	7	3	1	2	3	1				1	10	7	4	4	2	5		8
October.....	43	24	19			2	7	5	1	3	5	5	2	2	3	5	2				3	7	10	4	4	1	1		3
November.....	29	11	18			3	12	2	1	1	1	5	2	2	2	2	2				1	9	6	4	4	2	1		4
December.....	43	22	21			7	12	7	2	2	1	5	4	3	2	2	2				1	10	8	7	5	6	2		3
Total.....	616	314	297		5	40	213	72	16	10	51	62	46	33	24	38	11	11	15	16	127	133	102	78	38	44		62	

IN THE ROMAN CATHOLIC CEMETERY.

Months.	No.	Male.		Female.	Not known.	Still Born.	Under 2 years.	2 to 8 years.	8 to 15 years.	15 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	50 to 60 years.	60 to 70 years.	Over 70 years.	Not known.	Centre.	West.	East.	St. An- toine.	St. Ann's.	St. Law- rence.	St. Louis.	St. James.	St. Mary.	Scours.	Grises.	Coun- ty.
January.....	173	84	89			33	49	27	2	3	19	13	6	6	8	6	1	14	2	3	35	20	37	15	16	19		20	
February.....	158	71	87			28	64	21	9	3	7	5	4	4	4	12		7	4	4	27	19	16	28	13	15		12	
March.....	182	84	98			49	51	29	7	4	10	8	8	9	7	4		6	1	4	29	25	24	21	16	13		30	
April.....	183	91	92			41	64	19	4	3	9	9	6	11	12	5		10	2	3	29	11	9	25	24	14		39	
May.....	221	102	119			67	75	23	3	3	1	8	11	7	8	7		7	2	3	30	13	12	24	21	16		63	
June.....	289	138	151			64	157	21	2	4	8	10	9	9	9	9		6	1	7	32	36	18	35	45	24		45	
July.....	359	165	174			83	169	29	4	4	13	15	9	11	8	14		22	2	5	48	34	23	37	47	33		50	
August.....	265	131	134			56	126	30	8	8	9	8	7	4	3	6		10	2	1	27	30	15	29	42	28		26	
September.....	204	100	104			53	68	30	1	4	11	8	5	6	6	10		7	3	1	30	22	11	24	24	22		42	
October.....	174	80	94			49	39	26	1	4	11	8	9	9	14	4		13	1	2	20	23	16	23	18	13		34	
November.....	171	86	85			39	37	29	8	8	8	12	6	10	4	11		15	3	5	17	19	10	18	23	23		31	
December.....	178	91	87			34	45	30	5	6	14	13	3	9	9	7		16	3	5	18	24	10	11	22	27		25	
Total.....	2557	1248	1314		506	947	314	54	45	128	113	82	93	88	95	1	133	18	44	342	276	191	290	311	247	454		251	

ABSTRACT OF METEOROLOGICAL OBSERVATIONS AT MONTREAL IN OCTOBER, 1861.

By Archibald Hall, M.D.

Day.	DAILY MEANS OF THE							THERMOMETER.		WIND.			RAIN AND SNOW.			GENERAL OBSERVATIONS.
	Barometer reduced to 32° Fahr.	Temperature of the Air.	Dew Point.	Relative Humidity.	CLOUDS.		Maximum read at 9 P. M.	Minimum read at 7 A. M.	Its general Direction and Mean Force from 0 Calm to 10 Violent	Rain in 24 hrs read at 10 A. M.	Snow in 24 hrs read at 10 A. M.	Total rain and melted snow.				
					Ozone.	Ambient.							General description.	Inch.	Inch.	
1	30.361	51.1	46.2	85	0.10	0.10	53.0	40.0	S.S.W.	0.10						
2	29.921	60.8	53.1	80	7.50	4.3	67.5	52.6	S.	0.6						
3	29.859	63.4	53.0	86	7.50	3.0	65.9	48.5	S.W.	4.0		Inap.	Inap.			
4	30.107	48.8	41.3	17	8.00	9.9	52.4	44.5	S.S.E.	2.6						
5	29.861	44.4	43.2	81	9.50	10.0	48.8	39.0	N.N.E.	4.0		0.35	0.35			
6	29.744	57.1	53.1	89	10.00	10.0	60.6	45.4	W.	1.3		0.20	0.20			
7	30.142	53.6	43.0	84	10.00	10.0	57.0	47.0	W.	2.3		0.85	0.85			
8	30.196	50.4	45.5	84	9.00	6.0	54.0	42.0	N.	2.0		0.38	0.38	Hoar frost early A.M.		
9	30.345	53.6	48.4	85	7.50	1.3	59.6	50.0	N.	1.3		0.10	0.10			
10	30.243	55.2	48.7	84	7.50	2.3	62.0	42.4	N.N.E.	1.0						
11	29.865	50.4	46.8	95	10.00	9.0	53.0	46.5	N.N.E.	1.0		Inap.	Inap.	Aurora with streamers.		
12	29.628	54.2	47.1	79	9.00	7.3	53.0	49.9	S.W.	2.0		0.92	0.92			
13	29.609	50.9	46.9	90	9.00	9.3	56.5	45.0	N.N.W.	3.6		0.28	0.28			
14	29.780	50.6	41.9	74	7.50	5.3	57.6	39.5	W.N.W.	3.0		0.01	0.01			
15	30.030	50.0	39.8	71	5.00	2.0	55.9	42.9	W.	3.0				Aurora with streamers.		
16	30.083	51.0	42.7	75	5.00	8.6	58.5	36.2	E.S.E.	1.3				Solar Halo early A.M.		
17	29.952	59.6	53.9	85	5.50	9.6	63.8	35.2	S.W.	1.3						
18	29.850	51.9	48.5	81	10.00	10.0	58.2	46.5	N.	3.0	0.49		0.49			
19	29.672	49.9	45.5	87	10.00	10.0	59.0	42.0	N.E.	3.6	0.11		0.11			
20	29.936	45.2	35.6	70	8.00	1.3	53.0	39.5	W.N.W.	2.3	0.12		0.12			
21	30.313	39.0	30.4	70	4.00	0.0	43.0	32.4	W.N.W.	1.3	0.02		0.02	Hard frost.		
22	30.021	46.9	39.3	79	5.50	4.3	55.0	30.0	S.	4.0						
23	29.594	50.1	45.5	87	9.00	10.0	58.2	41.5	W.S.W.	3.6	0.13		0.13	Slight snow—Au. with stre.		
24	30.073	36.6	27.7	71	4.50	5.3	43.8	32.6	W.N.W.	2.3	0.14		0.14	Auroral light.		
25	30.329	33.6	29.9	70	4.00	2.0	45.2	27.2	S.	2.6						
26	30.164	46.7	40.3	79	5.50	10.0	53.5	35.8	S.	1.6						
27	30.263	39.4	30.4	71	3.50	0.6	53.4	35.5	N.N.E.	2.0	0.19		0.19	Aurora with streamers.		
28	30.149	35.9	27.6	69	2.00	0.0	41.0	23.2	W.N.W.	1.3				Hard frost.		
29	29.558	44.4	35.7	72	2.00	0.0	51.3	34.5	W.S.W.	1.2				Hard frost.		
30	29.434	44.1	35.9	73	4.50	6.3	49.8	34.4	E.S.E.	1.2				Hard frost.		
31	29.313	44.1	17.9	80	10.00	9.3	50.3	36.8	W.S.W.	2.0		0.05	0.05			
S's																
M's	29.605	49.00	42.46	806			55.12	40.11						4.25		

ABSTRACT OF METEOROLOGICAL OBSERVATIONS AT TORONTO IN OCTOBER, 1861.

Compiled from the Records of the Magnetic Observatory.

Day.	DAILY MEANS OF THE							THERMOMETER.		WIND.			RAIN AND SNOW in 24 hours, ending at 6 A.M. next day.			GENERAL REMARKS.
	Barometer reduced to 32° Fahr.	Temperature of the Air.	Relative Humidity.	Amount of Cloudiness.	Maximum read at 9 A.M. of next day.		Minimum read at 2 P.M. of same day.	Dew Point at 3 P.M.	General Direction.	Mean Velocity in Miles per hour.	Rain.	Snow.	Total rain and melted Snow.	Ozone in 24 hours ending 6 A.M. of next day.		
					0-10	0									Inch.		Inch.	0.10
1	29.867	53.25	84	9	58.2	44.0	53.0	0	N	80	E	2.65				
2	5396	59.12	88	7	71.0	50.0	59.0	0	N	42	W	9.61				6 a.m. Foggy.
3	7018	56.07	70	5	65.2	54.0	49.5	0	N	62	W	7.16	.018			
4	6255	51.52	94	10	83.0	47.8	47.0	0	N	64	E	9.10	.625			
5	4337	55.25	96	10	59.4	47.0	55.0	0	N	40	E	3.60	.012			Lightning in S. at 8 p.m.
6		Sun day			55.5	51.1			N	83	W	7.32	.415			
7	7552	47.40	86	6	53.5	38.8	49.0	0	N	21	E	3.43				Solar halo.
8	8610	50.28	82	0	58.0	43.8	51.5	5	N	86	E	4.37				Solar halo.
9	9273	52.22	75	2	59.0	44.5	50.5	5	E	69	E	5.06				Fine Auroral display.
10	7778	52.33	84	4	60.6	47.2	50.0	0	N	72	W	3.76	.058			Rainbow at 5 p.m.
11	4530	52.75	90	9	43.8	47.2	42.0	0	N	59	W	9.50	.005			
12	1713	45.25	77	9	50.8	38.5			N	72	W	2.99	.003			
13		Sun day			54.0	35.5			N	61	W	11.35				Auroral light and streamers.
14	5547	50.12	75	6	67.4	35.5	54.0	0	N	71	W	6.73				
15	7575	46.23	74	6	55.2	35.0	39.0	0	S	69	E	4.02				Solar halo.
16	6383	52.73	90	10	57.3	45.5	44.0	0	S	84	E	2.49				Foggy, lunar halo.
17	5708	56.83	83	9	62.0	50.0	53.0	0	N	50	E	4.07	.080			
18	4603	56.83	88	10	62.0	55.0	55.0	0	N	63	E	4.29	.030			
19	4202	51.63	82	9	57.2	52.0	49.0	0	N	78	W	8.02	.072			
20		Sun day			52.4	40.5			N	55	W	7.07				
21	8473	44.40	75	1	52.0	37.0	37.0	0	E			9.43				
22	4765	51.03	87	7	57.2	38.8	51.0	0	S	8	W	6.47	.455			
23	4175	40.75	77	6	47.4	49.8	36.0	0	N	80	W	10.20	.043			First snow of season.
24	8960	34.27	78	3	42.0	39.5	32.0	0	N	55	W	6.55				Fine Auroral display.
25	9262	45.77	78	6	51.8	29.0	44.0	0	N	72	W	6.32				
26	8363	44.22	83	6	53.2	43.8	43.0	0	N	72	W	6.50				Lightning in S. 10 p.m.
27		Sun day			46.2	31.4			N	34	E	4.88				
28	7893	38.52	74	0	47.0	31.0	38.0	0	N	75	E	3.71				
29	2892	42.82	81	2	48.8	32.0	36.0	0	S	83	E	5.17	.105			
30	0910	40.83	89	6	45.5	41.0	37.0	0	N	44	W	4.67	.070			
31	6083	43.48	84	9	49.0	35.4	39.0	0	N	55	W	4.08				
S's																
M's	29.6191	48.74	82	6	53.34	41.62	46.46		N. 61 W.	5.96		1.993	Inap.			