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# JOURNAL OF a pryer <br> EDICATION, Cemada. 

Vol. XV.
TORONTO : MAY, 1862.


## 1. edapets on ceteteoroldgy amd Ctimate.

## METEOROLOGY OF TORONTO, FOR 1861.*

The year 1861, with respect to its temperature, exhibited, as a whole, nothing extraordinary, the mean of the year differing from the average of twenty-two years to the extent of only $0^{\circ} .10$ in excess. The monthly means, moreover, did not differ in a marked degree from the means proper to the several months derived from twenty-two years, the average deviation, without regard to sign, being $2^{\circ} .24$; while the average deviation in the whole period of twenty-two years, and referred to the same standard, was $2^{\circ} .44$. If, however, the signs of the deviations be taken into account, it will be seen that the compensations by which the annual mean was maintained, were of the kind that may be styled unseasonable, being such as tended to weaken rather than to intensify the distinctive characters of the different parts of the year. Thus, from May to August-comprising the greater part of the year in which the temperature is above the yearly mean-the monthly means were relatively low; while in February and December, the monthly means were relatively high. The depression $\left(3^{\circ} .9\right)$ in the temperature of May, was never exceeded in any May of former years, and was nearly approached only in 1849 and 1851, when in both cases the cold of May was succeeded by unusual warmth in June and July. The abnormal warmth of April served only to aggravate

[^0]the evil, by hastening the vegetation that was thrown back by the frosts that followed in May. The bad effects of a generally low summer temperature may perhaps be modified, as regards some plants, by occasional bursts of heat, though they be necessarily balanced by unusually low temperatures at other parts of the season. No such mitigating circumstances occurred in 1861, as the warmest day and the absolutely highest temperature of the year were both considerably below the twentytwo years' average of these quantities.

The hygrometric condition of the summer was not favourable; the mean relative humidity of May, June, and July, being 70 against 74, the twenty-one years' average for these months. But as the temperatures were low, the foregoing numbers do not present so strong a contrast as do the tensions of vapour, which for the same three months were - 359 in 1861, and -393 on the average of twenty-one years. The contrast in this respect between 1860 and 1861, was very conspicuous in May, the tension of vapour for this month being more than 41 per cent. greater in 1860 than in 1861.
May and June were 8 per cent. and 16 per cent. less cloudy than is usual in those months; while later in the season, when a bright sun is more in request, clouds were more than 20 per cent. in excess.

The depth of rain, which on the whole year was three inches in defect, was deficient in June and July to the extent of more than an inch and a half. In May, when rain is a hindrance to gardening and agricultural operations, it was rather in excess ; while, as before stated, there was a want of that moisture in the air whose presence is favourable to the development of young leaves.
In the following summary, the chief meteorological elements relative to the year 1861, are compared with the average results derived from a series of years, as well as with extreme values that have occurred during the same series :

TEMPERATURE.

|  | 1861. | Average of 22 years. | Extremes in 22 years. |  |
| :---: | :---: | :---: | :---: | :---: |
| Mean temperature of the year.... | $44^{\circ} 22$ | $44 .{ }^{\circ} 12$ | $\left(\begin{array}{c} 46^{\circ} .36 \\ \text { (in } 1846) \end{array}\right.$ | $\left(\begin{array}{c} 42^{\circ} \cdot 16 \\ (\text { in } 1856 .) \end{array}\right.$ |
| Warmest month | August. | July. | July1854 | Aug 1860 |
| when mean temp. of month was Coldest month. | $65^{\circ} .48$ January. | $\stackrel{66^{\circ} .85}{\text { February }}$ | 72 Jan. 1857 | $\stackrel{64}{ }{ }^{\text {Feb. }} .4848$ |
| when mean temp. of month was | $19^{\circ} .86$ | $22^{\circ} .98$ | 12\%.75 | $26^{\circ} .60$ |
| Difference between the warmest and coldest months. | $45^{\circ} .62$ | $43^{\circ} .87$ |  |  |

TEMPERATURE－Continued．

|  | 1561. | Average of 22 years． | Extremes in 22 years． |  |
| :---: | :---: | :---: | :---: | :---: |
| Mean of deviations of monthly means，from their respective $\}$ $\left.\begin{array}{l}\text { averages of } 22 \text { ycars，signs of } \\ \text { deviation being disregariled．．}\end{array}\right\}$ | 20． 24 | $\left.2^{\circ} \cdot 44\right\}$ | $\begin{gathered} 3^{\circ} 55 \\ \text { (in } 1843 \\ \text { and } 1857 \\ \text { Jan. 1857 } \end{gathered}$ | $\begin{gathered} 1^{\circ} .35 \\ \left(\text { in }_{1853 .)}\right. \end{gathered}$ |
| Month of grentest deviation，？ without regard to sign．．．．．． when the monthly mean dif－ | Decem＇r． | January． | $\left\lvert\, \begin{gathered}\text { Jan．} 1857 \\ 10^{0.7}\end{gathered}\right.$ |  |
| fered from the 23 years＇are－ rage of the same month by | 50.0 | $3^{2} .9$ | July 12 | July 31＊ |
| Warmest day ．．．．．．．．．．．．．．．． | Aug． 3 | July 20 | $(1845$. $82^{\circ} 3$ | （1844．） $73^{\circ} .75$ |
| when the mean of the day was． | $74^{\circ} .20$ | $77^{\circ} .28$ | Feb．6， 55 | Dec． 22 |
| Coldest day ．．．．．．．．．．．．．．．．．．．． | Feb． 7 | Jan． 24 | $\left\|\begin{array}{l} \operatorname{Jan} 23.57 \\ -14^{\circ} .38 \end{array}\right\|$ | 1843.$)$ $+9^{\circ} .57$ |
| When the mean of the day was． | $-7^{\circ} .7$ | $-0^{\circ} .87$ | $99^{\text {¢ } .2}$ | $83^{20} .4$ |
| Highest temperature． | $8 \% 8$ | $90^{\circ} .4$ | Ang． 24 | Aug． 19 |
| which occurred on | June 9 | July 23 | （1854．） | （1840．） |
|  |  |  | $-26 \% .5$ | ＋10．9 |
| Lowest temperature | $-20^{\circ} .8$ | $-129.3$ | Jian． 26 | Jan． 2 |
| which occurred on | Feb． 8 | Jan． 25 | （1859．） | （1842．） |
| ange | $108^{\circ} .6$ | $102^{\circ} .7$ | （in 1855.2 ． | （in 1847．） |

There were twenty－seven days when the mean temperature of the day differed $12^{\circ}$ and upwards from the normal mean of the day． Their distribution among the several months may be seen in the following table：

DISTRIBUTION OF TEMPERATURES．


BAROMETER．

|  | 1861. | Average of 18 jears． | Extremes in 18 years． |  |
| :---: | :---: | :---: | :---: | :---: |
| Nean pressure of the year | 29.6008 | 29.6133 | $29.6,679$ （in 1849） | 20.5880 （in 1852．） |
| Month of highest pressure | December | September | June， 1849 | Scpt． 1860 |
| when the mean pres－$\}$ sure of month was | 29.7461 | 29.6629 | 29.8030 | 20.6733 |
| Month of lowest pressure | Norember | June | March， 1859 | Nor． 1849 |
| when the mean pres－？ sure of month was | 29.5371 | 20.5624 | 29.4215 | 20.5868 |


|  | 1861. | Arerage of 9 years． | Extremes in | 9 years． |
| :---: | :---: | :---: | :---: | :---: |
| Maximum pressure of year which occurred ．．．．．． | $\left\{\begin{array}{c} 30.330 \\ \left\{\begin{array}{c} \text { Jan. } 22 \\ 7 \mathrm{p} . \mathrm{m} . \end{array}\right\} \\ 28.644 \\ \left\{\begin{array}{l} \text { May } 6 \\ \text { I0p.m. } \end{array}\right\} \\ 1.686 \end{array}\right\}$ | 30.372 | 30.552 | 30.245 |
|  |  |  | Jan．1855 | Dec．1854 |
| Minimum pressure of year which occurred ．．．．．． |  | 28.592 | 28.286 | 28.849 |
|  |  | － | March， 1859 March， 1858 |  |
| Range of the year．．．．． |  | 1.780 | $\begin{gathered} 2.106 \\ \text { (in } 1859 .) \end{gathered}$ | $\begin{gathered} 1.429 \\ \text { (in } 1860 \text { ) } \end{gathered}$ |

There were one hundred and three days when the mean pressure of the day differed 0.200 of an inch and upwards，from the adopted normal mean of the clay．Their distribution through the year may be seen from the following table：

The mcan temperature of the warmest day in the foregoing fable，refers to the twenty－twoyears averape of the wamest has in cach yenr irrespertive of the ir date，Lhe averate date being simply the arithimetice mean of the several diates mea－

 yeceniber beiag considered to belumg to the following ycar．

Distribetion of mean pressure．

| M＇ths． | 号 | $\stackrel{8}{\text { ¢ }}$ | 䁉 | 公至 | 它它宫 | 容 | $\stackrel{80}{3}$ | 范 | ¢ | － | ®ٌ | 唇 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Excess | 5 | 4 | 5 | 4 | 5 1 | 0 | 3 | 2 | 5 | 3 | 9 | 46 |
| Defect． | 6 | 9 | 7 | 6 | $5{ }^{5} 1$ | 3 | 0 | 4 | 6 | 7 | 3 | 75 |
| Total． | 11 | 13 | 12 | 10 | 10 | 3 | 3 | 6 | 11 | 10 | 12 | 103 |
| IIUMIDITY． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 1801. | $\begin{gathered} \text { Avera } \\ 20 \mathrm{y} \end{gathered}$ | ge of cars． | Ext | remes | in | 20 yea | ars． |
| Mcan humidity of the year <br> M＇th of greatest humidity <br> when mean humidity of month was．．．．$\}$ <br> Month of least humidity． when the mean of the month was．．．．．． |  |  |  |  | 78 |  | 8 |  | in 185 |  | 73，in | 1858 |
|  |  |  |  |  | January | Jan | uary |  | ． 185 |  | Dec． 1 | 858 |
|  |  |  |  |  | 88 |  | 3 |  | 89 |  |  |  |
|  |  |  |  |  | May |  | ay |  | b． 184 |  | April | 1849 |
|  |  |  |  |  | 69 |  | 2 |  | 58 |  | 76 |  |
| CLOUDS． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 1861. | $\begin{array}{\|c} \text { Avers } \\ 9 y \end{array}$ | age of ears． |  | xtrem | es in | n 9 y | ars． |
| Mean cloudiness of year． |  |  |  |  | 62 |  | 60 |  | in 180 |  | T，in＇ | 53＇56 |
| Most cloudy month．．．． |  |  |  |  | February | Dece | mber |  | ce＇58 |  | Dec． | 1857 |
|  |  |  |  |  |  |  |  |  | eb．＇61 |  |  |  |
| When the mean of the $\}$ |  |  |  |  | 83 |  | 75 |  | 83 |  |  |  |
| Least clondy month ．．．． |  |  |  |  | June | July | \＆Aug． |  | y， 18 |  | June， | 1861 |
| when the mean of the ？ month was．．．．．． |  |  |  |  | 45 |  | 45＊ |  | 34 |  |  | 5＊ |

## WIND．

|  | 1861. | Result of 14 years． | Extremes in 14 years． |  |
| :---: | :---: | :---: | :---: | :---: |
| Resultant direction． | N． $56^{\circ} \mathrm{w}$ ． | N． $60^{\circ} \mathrm{w}$ ． |  |  |
| Mean result veloc．in miles | 2.11 | 1.82 |  |  |
| Mean velocity，without $\}$ regard to direction． | 7.47 | 6.78 | $\left\{\begin{array}{c}8.55 \\ \text { in } 1860\end{array}\right\}$ | $\left\{\begin{array}{c}5.10 \\ \text { in } 1853\end{array}\right.$ |
| Month of g＇test mean vel when m＇n velocity was | $\begin{gathered} \text { February } \\ 10.58 \end{gathered}$ | March 8.60 | $\left\lvert\, \begin{gathered} \text { March, } 1860 \\ 12.41 \end{gathered}\right.$ | $\begin{gathered} \text { Jan. } 1848 \\ 5.82 \end{gathered}$ |
| Month of least mean vel when m＇n velocity was | $\begin{gathered} \text { August } \\ 4.21 \end{gathered}$ | July 4.91 | $\begin{gathered} \text { Aug. } 1852 \\ 3.30 \end{gathered}$ | Scpt． 1860 5.79 |


| RAIN． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1861. | Average of 21 years． | Extremes in 21 years． |  |
| Depth in year in inches ． | 26.995 | 30.324 | $\{43.555\}$ | $\{21.505\}$ |
| No．of days when rain fell | 136 | 106 | 136 in 1861 | 80 in 1841 |
| Greatest depth in one month fell in ．．．． | November | September | Sept．，1843 | Sept 1848 |
| when it amounted to．． | 4.294 | 3.973 | 9.760 | 3.115 |
| Rainy days most frequent when their number was | ${ }_{\text {September }}$ | June | $\begin{gathered} \text { June, } 1857 \\ 21 \end{gathered}$ | $\begin{gathered} \text { May, } 11 \\ 1841 \\ \hline \end{gathered}$ |
| Greatest depth on one day | 3.132 | 2.138 | 3.360 | ．． |
| which fell on ．．．．．．．． | Nov．2nd | ．． | Oct．6， 1849 | ． |
| Greatest depth in 1 hour | 0.41 |  | ．． | ．． |
| which fell between．$\{$ | $\begin{aligned} & 1 \& 2 \text { A. M. } \\ & \text { Aug. 2lst } \end{aligned}$ | ． | $\cdots$ |  |

The distribution of rain through the day，both as regards depth and frequency，is given in the following table derived from an hourly rain gauge in operation from April to November inclusive ：
＊The average minimum of cloudiness in the second colnmen，is the minimum of the iwelve mmithly means of nine vears，nud does not always include the lowest the highest miniurum in the fuurth column should be numerically equal to the minimum on the average of nine years．

DEPTH AND FREQUENCY OF RAIN.


RAIN AND SNOW (Combined.)
Where 10 inches of snow are considered as equivalent to 1 inch of rain.

|  | 1861. | Average of 19 years \& 22 years. |
| :---: | :---: | :---: |
| Total depth in the year. | 34.475 | 36.488 |
| Number of days in which rain or snow fell | 34.475 200 | $160^{*}$ |
| Greatest depth in one month fell in... | November | September |
|  | 4.614 | 3.973 |
| Days of aqueous precipitation most frequent in When their number was. | January 23 | $\begin{gathered} \text { December } \\ 18^{*} \end{gathered}$ |

On February 7 th, a heavy snow-storm occurred, accompanied by a strong gale and intense cold. At one part of the day, when the temperature was $14^{\circ} 3$ below zero, the wind was blowing more than 33 miles an hour, with heavy falling and drifting snow. The temperature afterwards fell to $20^{\circ} 8$ below zero, but at that time the gale had subsided.

## 2. THE CLIMATE OF CANADA.

L'Abbe Ferland, in his History of Canada, shews by a comparison of meteorolorical records kept here since the earliest settlement of country, that the climate has undergone no chang?, as the first colonisls imagined it would. The observations of Upper Canada ${ }^{0} \mathrm{cou}_{n}$ establish the same conclusion for the western portion of our country, as we gather from the following report of a conversation at meeting of the Uanadian Institute, Toronto:
Judge Hagarty. - Do the observations of 20 years shew any permanent change of temperature?
Professor Kingston (of the Meteorological Observatory.)-There
is no perceptible change as far as I can judge. The figures seem to
ascillate, without shewing anything like a secular increase or dimiation.
Mr. T. C. Keefer.-It appears that the variations of mean anQual temparature for a period of 22 years are only about four degrees. How does that compare with other countries?

* These numbers include the cases in which both rain and snow have fallen in the abo day, and which have b:en reckoned both in the rain and in the snow tables.

Prof. Kingston. --To the best of my recollection, the fluctuations of mean temperatures in England are much greater.

Mr. Keefer.-It appears to me that 4 degrees is a very small variation for a period of 20 years, and that it speaks well for the climate of this country.

## Table A.-METEOROLOGICAL STATIONS AT THE SENIOR COUNTY GRAMMAR SCHOOLS OF UPPER CANADA.

Under the authority of the Consolidated Graminar School Act, a xpecial grant of $\$ 400$ per annum is made to each Senior Comuty Grammar School, with participation in the distribution of the Gieneral School Fund; provision is also made for the eatablishment of a Meteoroloyical Stat on at each of these Senior Schools. and it is declared to be the duty of the Diaster to make the pre-cribed heteorological heturna Conity Grammar Schools have been established, only 181 have contributed thene. cessary sum of half-price to purchase the necessary instruments end hut fest of these (as will be seen from the followitis table) make the returns required by law. Steps it is honed, will shortly be takell to enforce the law, or restrict the grant to those Stations only from which returus are received.

| Name of Meteoroloxical Station. | No. of months the Station has been estahbinhed to December, 1861, inclusive. | No.of monthly ab. stracts received at the Education Offter, to D'cember. 1881, inclusive. | Character of A bstracts received. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  | Wrll prepared. | Indifferently prepared. | Badly prujared |
| 1. Niagara .. | 48 | 10 | 8 | 2 | -• |
| 2. Hamilton . | 48 | 36 | 33 | 3 |  |
| 3. Belleville | 48 | 38 | $3 ;$ | 2 |  |
| 4. Barric .... | 48 | 20 | 20 | . |  |
| 5. Chatham . | 48 | 15 | - | 11 | 4 |
| 6. Port Sarnia | 48 | 26 | 26 | . |  |
| 7. Milton | 47 | 3 | -• | - | 3 |
| 8. Cornwall. . | 47 | 31 | 31 | - | . |
| 9. Guelph | 40 | 1 | 1 | - | - |
| 10. Whitby . | 40 | 36 | 35 | 1 | . |
| 11. Perth ... | 39 | 10 | 10 | - | - |
| 12. 'icton... | 39 | 22 | 22 | - | -• |
| 13. Brantford | 30 | 21 | 19 | 2 | - |
| 14. L'Orignal | 4 |  | $\cdots$ | - | - |
| 15. Stratford. | 17 | 17 | 17 |  |  |
| 16. Ottava . . | 4 | 4 | 4 | $\cdots$ |  |
| 17. Woodst'ck | 2 | -. | . | - |  |

Table 13.-SHEWING THE NUMBER OF MONTHS THAT METEOROLOGHCAL ARSTRACTS HAVE BEEN RECEIVED FKOM THE MFFERENT S'TATIONS. FOR THE YEAR I861.

| Name of Meteorological Station. |  | Character of Abstracts received. |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Well prepared. | Indifferen'y prepared. | Badly prepared. |
| 1. †Niagara | 1858 | 8 | - | $\cdots$ |
| 2. †Hamilton | 1858 | 11 | . | . |
| 3. Belleville | 1858 | 12 | .. | - |
| 4. †Barrie | 1858 | 1 | . | - |
| 5. Hhatham | 1858 | . | . | - |
| 6. †Port Sarnia | 1858 | . | . | - |
| 7. + Milton | 1858 | - | . | $\cdots$ |
| 8. CCornmall | 1558 | 11 | . | . |
| 9. $\dagger$ Guelph | 1858 | - | . | . |
| 10. Whitby | 1858 | 12 | . | . . |
| 11. $\dagger$ Perth | 1858 | , | . | . |
| 12. $\dagger$ Picton. | 1858 | 11 | . | - |
| 13. Brantford. | 1859 | 9 | . | -• |
| 14. †L'Original | 1861 | $\cdots$ | - | . |
| 15. Stratiord. | 1860 | 12 | - | - |
| 16. Ottawa | 1861 | 4 | - | . |
| 17. Woodstock | 1862 | . | . | . |

17. Woodstock

* Station at Cayuga established February, 1863
$\dagger$ The returns required by law have only been in part, or not at all, received from these Stations duriug the year 1861.

ABSTRACT OF METEOROLOGICAL OBSERVATIONS MADE AT SOME OF THE SENIOR COUNTY GRAMMAR SCHOOL STATIONS IN UPPER CANADA, DURING THE YEARS 1859, 1860, AND 1861.
$N_{0 r_{2},-1}$ (Compiled at the Educational Department, Toronto.)
Nore, As the prescribed monthly Meteorological Reports have not been regularly received from the different Stations (see Table A), we are not ablo to insert a complete abstract for the entire jear; we have, however, selected four monthly reports of each year, the calculations in which are actually correct.


1. BARRIE.-Rev. W. F. CHECKLEY, B.A., Observer.

 | 29.531 |
| :--- |
| 29.478 |
| 29.330 |
| 29.449 | 28.414

28.822
28.976
28.698
.458
.471
.120
.462

| 46.6 | -37.0 | 40.0 | 1.4 | 20 |
| ---: | ---: | ---: | ---: | ---: |
| 91.1 | 28.0 | 42.6 | 14.1 | 28 |
| 91.6 | 44.0 | 37.9 | 5.4 | 10 |
| 78.3 | 19.8 | 28.0 | 4.6 | 4 |

$$
\begin{array}{|c||r|r}
40.6 \\
76.4 \\
77.9 \\
65.9 & 29 & -1.0 \\
4 & 36.6 \\
\hline & 26.8 \\
\hline
\end{array}
$$

$$
\left|\begin{array}{l}
66 \\
44 \\
54 \\
36
\end{array}\right|
$$

| 10 |
| ---: |
| 5 |
| 7 |

9
$\cdots$
$\because$
2

| 1859. | Barombtre. |  |  | Temprratubr of Air. |  |  |  |  |  | Coldest Day. |  |  |  |  | Gemeras Remarin. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Montr. | Highest. | Lowest. | Greatest Daily Range. |  |  |  |  | $\begin{aligned} & \dot{\Phi} \\ & \text { ロ̈ } \end{aligned}$ |  | 岕 |  |  |  |  |  |  |  |
| 2. BELLEVILLE.-A. BURDON, Esq., Observer. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| January | 30.292 | 28.924 | . 669 | 46.3 | -30.0 | 36.7 | 5.0 | 20 | 40.1 | 10 | 19.1 | 86 |  | 7 |  |  |  |
| April....... | 29.966 | 28.980 | . 531 | 68.6 | 20.7 | 27.3 | 7.5 | 30 | 58.7 | 5 | 29.6 | 69 | 7 |  |  |  |  |
| June ....... | 29.912 | 29.288 | . 452 | 83.5 | 33.8 | 33.9 | 8.8 | 27 | 76.4 | 4 | 40.5 | 76 | 6 | . |  | on | 9th of April |
| October . | 29.936 | 29.064 | . 696 | 76.5 | 17.4 | 26.4 | 7.0 | 4 | 62.8 | 26 | 27.0 | 78 | 5 | . |  |  |  |

3. Chatham.-G. Jamieson, Esq., Observer.

4. CORNWALL.-Rev. H. W. DAVIES, M.A., Observer.

| January | 30.523 | 29.005 | . 529 | 49.0 | -7.1 | 38.7 | 4.1 | 21 | 36.6 | 12 | -6.9 | 71 | N. R. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| March | 30.398 | 28.491 | . 596 | 57.7 | -3.8 | 28.4 | 3.8 | 29 | 45.2 | 1 | 7.7 | 78 | 6 | 2 |
| June | 29.987 | 28.906 | . 731 | 78.2 | 34.2 | 33.3 | 7.1 | 2 | 70.0 | 4 | 42.9 | 80 | 5 | . |
| October | 30.103 | 29.223 | . 453 | 77.2 | 17.7 | 42.6 | 6.3 | 13 | 63.7 | 20 | 20.8 | 76 |  | 3 |

5. HAMILTON.-A. MACALLUM, Esq., Observer.

| January .... | 30.452 | 28.888 | . 667 | 47.4 | -29.7 | 41.4 | 4.6 | 20 | 45.0 | 10 | -14.4 | 78 |  | 2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April........ | 29.967 | 28.785 | . 549 | 59.5 | 24.6 | 27.6 | 7.6 | 12 | 53.7 | 5 | 31.9 | 75 | 3 | 4 | Two Auroras seen in April |
| June | 29.946 | 29.246 | . 488 | 80.5 | 37.5 | 33.0 | 10.5 | 15 | 70.5 | 4 | 39.6 | 76 | 9 |  |  |
| October . | 29.930 | 29.329 | . 372 | 76.7 | 24.1 | 40.3 | 11.3 | 4 | 68.7 | 26 | 27.0 | 70 | 8 | 2 |  |

6. PERTH.-R. T. LIVINGSTONE, Ese., Observer.

| September... | 29.820 | 28.694 | . 727 | 74.2 | 27.8 | 35.2 | 7.0 | 12 | 63.2 | 14 | 42.7 | N.R. | 15 | 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| October | 29.779 | 28.830 | . 730 | 73.8 | 14.6 | 38.2 | 10.1 | 5 | 62.5 | 26 | 23.4 | 75 | 7 |  | First Snow on the 14th 0? |
| November | 29.946 | 28.744 | 1.062 | 63.8 | 13.4 | 27.8 | 8.1 | 5 | 51.8 | 29 | 18.8 | 84 | N.r. | N.R. | Sept., at 7 a.m. |
| December... | 30.189 | 28.924 | . 825 | 54.6 | -30.2 | 39.1 | 6.1 | 1 | 41.0 | 28 | 19.6 | 82 | . | 13 |  |

7. BARNIA.-W. B. EVANS, Ese., M.A., Observer.

| January .... | 29.920 | 28.715 | . 605 | 46.4 | -23.6 | 33.8 | 3.5 | 14 | 39.9 | 10 | -1.0 | 91 | 2 | 4 | On April 19th, a white luminout |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April....... | 29.739 | 28.586 | . 576 | 66.1 | 24.7 | 33.9 | 3.8 | 11 | 55.9 | 4 | 30.9 | 91 | 2 | . | vens for about an hour. It |
| October .... | 29.648 | 28.969 | . 450 | N.R. | 25.5 | A.R. | N.R. | 5 | 65.6 | 26 | 28.1 | 92 | 2 |  | irst seen at $8 \mathrm{p} . \mathrm{m}$., extendid |
| December . . . | 29.932 | 28.831 | . 624 | 53.9 | 3.6 | 35.9 | 4.1 | 13 | 46.6 | 9 | 9.7 | 95 | 1 | 7 | from E. hor. to Z.; afterwar to W. hor., forming an arch |

8. WHITBY.-WILLIAM McCABE, Esq., Observer.

| January ....\| | 30.327 | 29.428 | . 432 | 48.8 | -22.6 | 43.2 | 1.8 | 21 | 35.6 | 11 | 6.4 | 72 | 1 | 4 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| March ...... | 30.225 | 28.413 | . 364 | 59.6 | 16.9 | 31.8 | 8.8 | 28 | 50.1 | 1 | 16.7 | 78 | 10 | 1 |  |  |
| July ....... | 30.132 | 29.291 | . 408 | 94.6 | 53.9 | 40.8 | 15.8 | 12 | 82.1 | 26 | 56.6 | 76 | 4 | . |  |  |
| October .... | 30.047 | 29.132 | . 703 | 70.6 | 21.3 |  |  | 6 | 60.1 | 26 | 27.7 | 76 | 4 |  |  |  |

Note.-No returns were received from four stations during 1859, viz.: Niagara, Milton, Guelph, and Picton.

1860.

1. BARRIE.-Rev. W. F. CHECKLEY, B.A., Observer.
2. BELLEVILLE.-A. BURDON, EsQ., Observer.

3. BRANTFORD.-D. G. SULLIVAN, EsQ., AND others, Observers.

| June | 29.471 | 28.600 | . 322 | 87.5 | 39.1 | 38.8 | 12.1 | 28 | 74.7 | 9 | 53.6 | 71 | 6 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| July | 29.545 | 28.847 | . 256 | 95.0 | 43.3 | 38.6 | 13.1 | 19 | 75.8 | 23 | 60.1 | 70 | 11 |  |
| August ..... | 29.599 | 28.978 | . 270 | 91.0 | 44.3 | 41.3 | 8.6 | 6 | 77.6 | 27 | 54.8 | 75 | 8 |  |
| October | 29.532 | 28.700 | . 562 | 68.0 | 31.1 | 27.4 | 7.6 | 31 | 60.1 | 12 | 38.7 | 84 | 9 |  |

4. CORNWALL.-Rev. H. W. DAVIES, M.A., Observer.

| January | 30.275 | 29,073 | . 585 | 49.5 | -9.9 | 39.0 | 4.4 | 21 | 38.3 | 13 | -5.5 | 86 | 2 | 5 | Aprij 20. First |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April | 29.912 | 29.191 | . 512 | 53.5 | 11.5 | 24.1 | 10.3 | 12 | 45.0 | 2 | 17.4 | 84 | 3 | 1 | the canal. - |
| June | 29.958 | 29.071 | . 427 | 83.2 | 54.9 | 30.1 | 8.6 | 14 | 71.8 | 19 | 45.1 | 81 | 10 |  | lasted about 4 min |
| Octobe | 30.113 | 29.028 | . 679 | 64.0 | 29.2 | 22.8 | 6.5 | 31 | 59.8 | 15 | 37.2 | 83 | 18 | , | ichter shock was fel 2Ath, at $7 \mathrm{am} . \mathrm{m}$. |


| 1860 ． | Barometre． |  |  | Temperature of Air． |  |  |  | Warmest Day． |  | $\begin{gathered} \text { Coldsst } \\ \text { Day. } \end{gathered}$ |  | $\\|_{\text {家 }}^{0}$ | $\overline{\text { 㐫 }}$ | $\begin{aligned} & \dot{8} \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | General Remariss． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Montr． | Highest． | Lowest． | $\left\|\begin{array}{c}\text { Greatest } \\ \text { Daily } \\ \text { Range．} \\ 0\end{array}\right\|$ |  | 部涼 |  |  | 涄 |  | $\begin{aligned} & \dot{8} \\ & \text { 囚⿴囗口灬日゙ } \end{aligned}$ |  | 㤩 | － | － |  |  |

5．HAMILTON－A．MACALLUM，Esq．，Observer．

| January ．．．． | 30.004 | 29.150 | ． 476 | 46.8 | －0．3 | 39.2 | 5.9 | 24 | 44.1 | 31 | 7.3 | 67 | 5 |  | July 1．A comet was seen in the |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April ．．．．．．． | 30.199 | 28.944 | ． 966 | 78.7 | 23.7 | N．R． | R． | 30 | 60.2 | 14 | 30.7 | 66 | 12 | 3 | N．W．at 9 p．m．About 20 nin． |
| Jaly | 29.861 | 29.018 | ． 582 | 89.7 | 42.8 | 33.2 | 11.2 | 16 | 79.3 | 10 | 61.9 | 70 | 11 |  | past nine，a meteor or great |
| October | 29.894 | 28.961 | ． 680 | 69.6 | 28.6 | 35.2 | 3.2 | 5 | 62.9 | 12 | 40.2 | 85 | 13 |  | brimiancy passed from to E ． |

6．PERTE．－R．T．LIVINGSTONE，Esq．，Observer．

| January | 29.981 | 28.955 | ． 825 | 45.4 | －30．8 | 44.4 | 11.0 | 24 | 38.5 | 2 | －17．6 | 80 | 5 | 17 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pebruary ．．． | 29.949 | 28.801 | ． 792 | 48.7 | －25．7 | 40.9 | 10.1 | 22 | 43.2 | 1 | －12．5 | 80 | 5 | 10 |
| March ．． | 29.762 | 28.679 | ． 830 | 64.8 | 8.3 | 35.9 | 5.0 | 19 | 49.5 | 22 | 15.4 | 76 | 4 | 7 |
| April．．．．．．． | 29.959 | 28.835 | 1.008 | 68.8 | 9.7 | 41.6 | 11.5 | 30 | 59.8 | 2 | 16.6 | 63 | 6 | 3 |

7．PICTON．－STUART FOSTER，Esq．，Observer．

| ${ }^{\text {Appril}}$ | 30.241 | 29.031 | ． 952 | 74.4 | 16.0 | 36.1 | 9.0 | 30 | 57.1 | 2 | 22.0 | 65 | 13 |  | lig．At 8 p．m．，${ }^{\text {a }}$ narrow belt of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| July | 29.819 | 29.170 | ． 395 | 85.4 | 50.4 | 29.7 | 10.2 | 19 | 73.1 | 5 | 58.2 | 78 | 13 |  |  |
| Norem | 29.997 | 28.923 | ． 791 | 68.7 | 17.4 | 23.5 | 6.7 | 1 | 64.3 | 24 | 23.2 | 84 | 19 | 9 | serred．－Oct．P6．Eelipse of the xun |
| October ．．．． | 29.979 | 29.076 | ． 582 | 69.4 | 27.1 | 26.5 | 5.9 | 31 | 64.0 | 6 | 38.5 | 85 | 17 |  | （em，an earthquame war ficio necom－ |

8．SARNIA．－W．B．EVANS，Esq．，M．A．Observer．


9．STRATFORD．－C．J．McGREGOR，Esq．，M．A．，Observer．

| September．．． | 29.169 | 28.413 | ． 403 | 76.3 | 25.5 | 35.2 | 9.9 | 5 | 67.9 | 29 | 36.2 | 81 | 11 |  | Auroras seen on the 6th．10th， |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| October ．．． | 29.049 | 28.192 | ． 559 | 63.8 | 26.2 | 25.3 | 3.6 | 31 | 56.9 | 12 | 35.6 | 85 | 15 |  | and 17th of Sept．－An Srolite |
| November．．． | 23.967 | 27.970 | ． 525 | 65.4 | 5.8 | 26.5 | 3.7 | 2 | 56.9 | 24 | 12.0 | 84 | 7 | 13 | was seen on 14th of October： |
| December．．． | 29.249 | 27.975 | ． 640 | 65.4 36.3 | －14．4 | 29.8 | 3.5 | 20 | 34.5 | 14 | －2．4 | 89 | 2 | 14 | －seen on the 10th and 15th of |

10．WHITBY．－W．McCABE，EsQ．，Observer．

| January | 30.185 | 29.278 | ． 549 | 48.7 | －3．6 | 36.6 | 4.8 | 24 | 40.9 | 31 | 4.4 | 77 | 2 | 3 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{4}$ pril ．． | 30.274 | 29.042 | ． 761 | 72.7 | 20.7 | 30.7 | 4.8 | 30 | 54.7 | 2 | 26.8 | 68 | 5 |  |  |
| $\mathrm{Jal}_{0}$ ． | 29.922 | 29.178 | ． 435 | 86.3 | 53.0 | 29.3 | 5.8 | 19 | 77.4 | 27 | 60.3 | 80 | 8 | － |  |
| October | 30.015 | 29.140 | ． 258 | 68.7 | 32.5 | 30.3 | 5.8 | 30 | 58.3 | 13 | 37.1 | 87 | 2 | － |  |

Nots．－No returns were received from four stations during the year，1860，viz．：Niagara，Chatham，Milton，and Guelph．
1861.

1．BARRIE．－Rsv．W．F．CHECKLEY，B．A．，Observer－for a portion of the year only．


## 2．BELLEVIILE．－A．BURDON，Esq．，Observer．

| Janua | 30.320 | 29.114 | ． 707 | 36.5 | －26．2 | 52.3 | 5.9 | 29 | 31.5 | 12 | －11．4 | 92 | N．R． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April ．． | 30.004 | 29.100 | ． 465 | 69.9 | －26．2 | 36.1 36.1 | 6.4 | 22 | 60.9 | 12 | －11．4 | 71 | 4 | ${ }_{1}$ |  |
| June | 29.672 | 28.672 | ． 388 | 88.1 | 34.0 | 43.1 | 6.6 | 11 | 73.5 | 13 | 52.9 | 70 | 5 |  | October a very rainy month． |
| October | 29.944 | 28.997 | ． 640 | 67.9 | 24.9 | 26.3 | 5.2 |  | 59.7 | 24 | 32.9 | 84 | 1 | ． |  |

3．BRANTFORD．－D．C．SULLIVAN，Esq．，AND others，Observers．

| January ．．．． | 29.873 | 28.624 | ． 741 | 41.5 | －21．7 | 23.3 | 6.3 | 7 | 34.6 | 12 | －1．2 | 87 | 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April．．．．．．． | 29.599 | 28.678 | ． 444 | 74.3 | 27.1 | 34.1 | 6.7 | 22 | 34.6 63.0 | 12 1 | 32.1 | 70 | 9 |  |  |
| June ．．．．．．． | 29.427 | 28.843 | ． 374 | 90.6 | 36.6 | 39.9 | 11.0 | 11 | 76.0 | 5 | 50.0 | 66 | 8 |  | Comet visible in N．horizon 22nd |
| Qoptember ．． | 29.547 | 28.742 | ． 649 | 79.3 | 39.1 | 29.0 | 7.7 | 19 | 69.4 | 28 | 46.3 | 83 | 9 |  |  |



4．CORNWALI．－Rev．H．W．DAVIES，M．A．，Observer．

|  |  |  |
| :--- | :--- | :--- |
| January $\ldots$. | 30.231 | 28.946 |
| April ．．．．．． | 30.013 | 28.916 |
| June ．．．．．．． | 29.738 | 29.141 |
| October $\ldots .$. | 29.942 | 29.144 |


| .663 | 44.0 | -21.2 | 35.7 |
| ---: | ---: | ---: | ---: |
| .391 | 77.8 | 20.8 | 35.8 |
| .463 | 91.8 | 38.6 | 36.8 |
| .648 | 72.4 | 29.8 | 30.0 |


| 5.4 | 16 | 34.3 | 12 | -2.9 | 81 | 5 | 14 |
| ---: | ---: | ---: | ---: | ---: | :---: | ---: | ---: |
| 9.2 | 22 | 66.3 | 18 | 31.7 | 71 | 9 | 2 |
| 9.8 | 11 | 79.9 | 5 | 45.0 | 58 | 8 |  |
| 7.6 | 3 | 66.5 | 25 | 44.7 | 70 | 11 | $\cdots$ |
|  |  |  |  |  |  |  |  |


| 1861. | Barometer． |  |  | Temperature of Air． |  |  |  | Warmest Day． |  | Coldest Day． |  |  | 充 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Monte． | Highest． | Lowest | （Greatest |  |  |  |  | 嶌 |  | $\begin{aligned} & \text { தi } \\ & \text { む̈ } \end{aligned}$ |  |  | 家 | 40， | Gineral Remarks． |

6．NIAGARA．－The Rev．H．PHILLIPS，M．A．，Observer．

| March ．．．．． | 30.199 | 29.239 | .737 | 58.7 | 3.4 | 39.5 | 8.0 | 29 | 47.5 | 7 | 10.6 | 84 | 7 | 8 | rst vessel seen on Take Ontario |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May ．．．．．．． | 30.051 | 28.707 | ． 684 | 75.7 | 31.6 | 34.5 | 7.7 | 24 | 66.9 | 1 | 35.3 | 82 | 11 | $1$ | disth March．－Violent snow |
| October | 30.106 | 29.112 | ． 657 | 71.4 | 30.3 | 27.0 | 6.1 | 5 | 63.4 | 24 | 36.9 | 90 | 9 | $1$ | pen passing Niagara on 18th |
| December | 30.281 | 29.276 | ． 954 | 64.5 | 9.5 | 38.4 | 6.0 | 10 | 60.3 | 3 | 17.1 | 86 | 6 | 6 | December． |

7．OTTAWA．－G．KENNEDY，Esq．，M．A．，Observer．


8．PERTH．－R．T．LIVINGSTONE，Fse．，Observer．


## 9．PICTON．－STUART FOSTER，EsQ．，Observer．

| January | 30.381 | 29.128 | ． 743 | 39.2 | －17．4 | 48.4 | 7.0 | 19 | 31.3 | 12 | －9．0 | 85 | 2 | 20 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April ．．．．．．． | 30.121 | 29.160 | ． 242 | 73.5 | 24.8 | 39.5 | 7.6 | 22 | 57.7 | 1 | 30.1 | 71 | 8 | 4 | First steamer came into the har |
| June ．．．．．．． | 29.830 | 29.207 | ． 389 | 86.5 | 47.3 | 29.7 | 7.2 | 11 | 73.5 | 4 | 56.1 | 76 | 10 |  | bour ou 17th April． |
| October | 30.101 | 29.057 | ． 569 | 70.2 | 29.0 | 23.0 | 7.5 | 2 | 62.3 | 24 | 34.2 | 89 | 3 | ． |  |

10．BTRATFORD－C．J．McGREGOR，Esq．，M．A．，Observer．

| February ．．． | 29.098 | 28.083 | ． 951 | 50.1 | －17．1 | 35.0 | 4.9 | 28 | 42.9 | 8 | 6.2 | 55 | 6 | 3 | Wild pizcons seen 13th April．－ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April ．． | 29.139 | 28.174 | ． 498 | 72.4 | 23.7 | 30.9 | 4.2 | 22 | 65.0 | 1 | 30.2 | 70 | 10 | 3 | Currant，rose，a ${ }^{\text {and lilace punhes }}$ |
| June | 28.926 | 28.442 | ． 453 | 83.9 | 37.4 | 34.9 | 5.6 | 11 | 71.7 | 5 | 51.5 | 76 | 1 |  | in Jeaf， $29 t h$ April．－Briliaith |
| Nove | 29.068 | 28.182 | ． 627 | 50.6 | 19.0 | 22.8 | 4.2 | 5 | 42.8 | 25 | 24.8 | 82 | 1 |  | June． |


| January ．．．． 30.284 | 29.069 | ． 753 | 45.8 | 1.8 | 27.6 | 1.8 | 16 | 32.7 | 12 | 4.5 | 72 | 1 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April ．．．．．．． 30.110 | 29.168 | ． 476 | 71.3 | 21.6 | 40.3 | 3.3 | 22 | 57.3 | 1 | 32.2 | 79 | 3 |  |
| June ．．．．．． 29.839 | 29.212 | ． 483 | 94.3 | 31.0 | 48.3 | 12.2 | 10 | －78．4 | 4 | 54.6 | 81 | 5 | － |
| October ．．．．｜｜30．081 | 29.115 | ． 597 | 70.8 | 5.8 | 39.7 | 5.8 | 2 | 62.2 | 24 | 34.6 | 81 | 4 |  |

Nore．－No returns were received from six stations during 1861，viz．：Chatham，Port Sarnia，Milton，Guelph，L＇Orignal，and Woodstock．

## 3．A CANADIAN WINTER＇S SUNSET．

The following is a description of a Canadian winter＇s sunset lately wituessel near London，Upper Canada，of such rare and imposing grandeur as it seldom falls to the lot of man to see．

For some days there has been a succession of rain storms，follow－ ed and intermixed with a cold so intense that the rain froze as it fell upon the trees．The effect upon the woods was novel and beautiful． Each tree was covered with a coat of sparkling ice from the highest branch to the root．The weight of the ice drew the houghs and ten der shoots into graceful，drooping curves；so that the shape of the trees was changed ：each one assuming a fantastic appearance more pleasing than its neighbour．The rugged arms of the oak hung down in faultless symmetry．The long branches of the elm，the ash， the pine，swept the ground with their majestic drapery of sparkling light，while the various small and ornamental natives of the woods were dwarfed to half their size，and under their load of glittering icicles seemed like innumerable plumes of feathers，studded with dia－ monds，grouped together to set off the grandeur of the ten thousand stately trees which towered around them in the armour of dazzling whiteness．

As seen from the eminence of the rirer＇s bank，the sight was one that will never be forgotten．A gradual dip in the foerst，rising some miles off，against the sky，enabled the beholder to take in an extent of landscape composed of apparrently an interminable wood， through which the far off winding of the river could be traced，by its broad band of silver light，and by the undulating nature of its banks．Every tree，and the tiniest twig on every tree，was covered with its coat of shining mail giving an appearance to the whole of a fairy forest，in which all the trees were made of pure silver．
To enhance the scene，the sun，which had all the day veiled bis face with winter clouds，burst forth suddenly in a stream of glory．－ The effect was magical．The forest was in an instant illumiuated with striking splendour．Each tree as it trembled in the evening breeze flashed up to the heavens ten thousand glories．But as the
sun set the sight became more and more enchanting．The heary clouds，which had extinguished the sun＇s beams all day，covered as with a dark massive mantle the whole heavens，excepting one long narrow belt of gold，which extended along the horizon，where the god of day was now hastening to rest．Through this narrow open－ ing the resplendent rays of the setting sun poured down upon the glittering forest in all their crimson grandeur．From crystal brilli－ ancy the woods for miles round changed to the colors of the emerald and of the ruby．As far as the eye could see，the forest glowed with trees of dazzling fire，which seemed to send up little streams of light against the leaden sky as the wind swept through their branches．
This grand and almost supernatural scene lasted for about ten minutes．The ruby brightness of the woods grew more intense－a halo of glory arched the earth in bold relief against the sombre heav－ ens．The sun set．A subdued light then fell upon the eye．The dazzling colors rapidly changed，each one mellowed and lost in its successor，until the whole faded rapidly away behind the murky wall of clouds，leaving the spell－bound beholder as one suddenly awakened from a gorgeous dream of fairy land．－Free Press．

## 4．NATURE＇S DIAMONDS－A BEAUTIFUL SIGHT．

On Saturday forenoon，5th March，a bird＇s eye view of Toronto was well worth obtaining．We hardly knew，before，that the scat－ tered trees throught our city could be made to complete such a splendid picture on a semi－wintry day．The drizzling rain as it fell， clung prettily to the branches of the trees，and was there arrested by a gentle grasp of frost．Then，as if by the touch of magic，the city seemed bedecked in diamonds－so sparkling and clear were the myriads of miniature little ice－bergs which gaily rode upon the limbs and boughs of every tree．The slightest shot of sunshine once，and but momentarily，illuminated the whole picture to a dazzling pitch， with its variegated hues．This scene appeared to be in proud，m－ jestic，defiance of all artistic imitations．With the merciless，melting
sun, advancing along to reign once more supreme, rare, and beautiful sights such as these, with which the freak of a winter's morning sometimes favors us, are left in memory. Certainly, for one particular hour, as the sun's rays struggled among the ice clad trees, our city looked most beautiful. The bridal veil of Nature seemed to clothe Toronto. Altogether there was an over-awing aspect of purity and enchantment, which, alone, the great Goddess, herself, can summons.-Leader.

## 5. A SHOWER OF SNOW BALLS.

J. French, of Moultonboro, New Hampshire, writes to the Boston Journal, that "on the morning of the 7th February, the surface of the earth in the vicinity of the above place was covered with balls of snow, from four to ten or twelve inches in diameter. They seemed to be perfect globes, and not more dense than the snow that had fallen previously iu the night. On some portions of the earth there were thousands to the acre ; on other portions less. Our physician, who happened to be out in the shower, described it as a shower of snow-balls coming from all point:, as the wind seemed to be itself at times from all quarters. They seemed to rest like magic upon the surface of the snow that had previously fallen in the night, and which was very light. A more beautiful sight than some of the fields presented here this morning is seldom seen in winter. Will some of the learned savans give us a philosophical solution of this phenomenon? These balls fell from the atmosphere."

## 6. WINTER IN CANADA.

by mrs. J. L. leprohon.
Nay, tell me not that with shivering fear,
You \&hrink from the thought of wintering here;
That the cold intense of our winter time, Is severe as that of Siberian clime; Aud if wishes could waft across the sea, To-night in your Enylish bome you would be.

Remember, no hedges there now are bright With verdure, or blossoms of hawthorn white; Iu damp sodden fields, or bare garden beds, No daisies or cowslips shew their fair heads; Whilst cold chillug winds and skies of dak hue, Tell, in England, as elsewhere, 'tis wiuter too.
Raise your cyes to our skies of azure hue, Admire their gleaming, metallice blue, Look round on the eath robed in mridtal white, All glittering and flashing with diamonds bright, Whilst o'erheal, her lover and lowd, the suu, Shines brightly as e'er in summer he's done.

In a graceful sleigh, drawn by spiited steed, You glide o'er the stow with lightuing speed, Whilst from haruess decked with ilvery bells, In sweet showers the somed on the clear uir swells, And th: keen bracirg breeze with vigour tife, Sends quick through your veins warm streams of life.

On, on nith your snow shoc, so strong and light, Thick blanket coat-s esh of sc:rrlet bright, And away o'er the deep and untrodden snow, Through wood, o'er mountain, untrammelled to go. Through lone narrow paths where in years long fled, The Indian passed with light active tread.

What 1 dare to rail at our snow-storms-oh, fie !
Pray view them with poet's or artist's eye,
Watch each pearly flike as it falls from above,
Like snowy plumes from some spotless dove, Cloilhing all objects in ermine of air,
Far purer than that which mowarchs wear.
Have you not witnessed our glorious nights, So brilliant with gleaming Northern lights,
Quick flathing nud darting acress the sky,
Whilst afar off, in the stary heavens high,
The slining moon pours down streaus of light,
O'er the silent earth robed in dazzling white.

There are times, too, our woods show wondrous sights, Such as are read of in Arabian neghte,
When branch and b. whig are all laden with gems,
Bright a: hose 1h:at deck Ea=tenll diadems;
And the sum theds a blaze of dizzling light, On luby, cpal, and diamond bright.

But tarry till Spring on Canadian shore, Yom'll ail at on winters then no more-
New hentth and fresh life through your vecins shall glow, Spite of piercing winds- epite of ice and snow, And I'd renture to promise in truth, my fiend, T'will not be the last that with us you'll spend.

## II. Z2nurs an exatical Celucatiou.

## 1. THE INTERNAL STRUCTURE OF SCHOOL HOUSES.

Much has been said and written, of late, on this subject. And after all the importance thrown around it by educators, men capable of knowing its importance, there exists, in many parts of our State, a most lamentable indifference in regard to it. Even in many of our villages, where external appearance is scrupulously consulted, internal arrangements are much disregarded.

There are but very few who seem to realise that the structure of the schnol room has anything to do with the formation of the mental habits of the children, confined day after day, within it. Indeed, many seem to forget that the mind is a principle of habit at all, and hence have but little about the influence brought to bear upon it. There is a vague idea that the mind of the child must, necessarily, conform to certain principles, of its own accord, and by the force of its own action, no matter what its surroundings. But surely this is a great mistake. Surrounding inflnences have as much to do in forming the mental habits of the child, as in shaping the course of manhoor. Who has not felt, more or less, the force of circumstances, in shaping his course of life? And where is the man whose habits, physical, mental, or religions, have not been very materially affected by his surroundings in life?

The most common fault, I think, in the structure of school houses, is, what is termed the "long seat" system. This is very common in our rural districts. Children are huddled together, six or eight on a seat, and then required to study! It is impossible. I do not believe that one in ten of those who call themselves men and women, could study under the same circumstances. How can children study, when they are necessarily interrupted, every few minutes? Every class that is called to recite, creates a perfect confusion throughout the school. One or two, leaving a seat, disturb all the others on that seat.

Suppose a scholar to be studying a lesson. The powers of his mind are just being concentrated on it, and he is begimning to think, when, all of a sudden, "Let me out," or, "Let me in," scatters his thoughts to the winds. Again and ogain he resumes his study, and as often he is interrupted. Is it surprising that a child, under such circumstances, can not hold his mind to his lesson? How many men or women, in society generally, would have sufficient mental discipline to do it, were they to take the child's place. I apprehend but few. And not one man in ten, or one child in a hundred, can be tenght the habit of mental concentration and continual application, with such surroumdings.

But what is a school for, if it be not to teach chidren to think? The mere knowledge of the branches pursued, is but a secnudary matter. It is the development and power of mind, that we should strive to secure. And whatever means the teacher needs to enable him to turn out men and women of mental strength and corvect moral culture, should be cheerfully furnished. And when the expense of a good, convenient school room is but little, if any, more than that of an inconvenient one-one that tends to murder rather than $\epsilon d u c a t e$ the pupils confined within it, surely it is a great wrong, by mere indifference, to deprive the children of that means of improvement.

Will not school officers look more closely to this matter? Many districts are losing much. yearly, for the want of a few dollars in hettering the internal structure of their school house. I heard a teacher remark, last week, "If those seats had been fixed, last fall, I could have earned the district from fifty to one huudred dollar's more than I have done." Ten dollars would have "fixed" the seats, I presume; and there would have been a gain by the district, of at least forty dollars. This is not an isolated case. A man can always do more with a good tool than he can with a poor one.-H., in Pernsylvania Scnool Journul.

## OUR NEW AND BETTER SCHOOL HOUSES.

In many parts of the West there is a decided demand for better school houses. It is time that all the old structures-rude and inconvenient-should pass away, and make room for more neat and better adapted buildings of modern times. School-houses should not be the last to show the improvements of a country. But it is often the case in wealthy and growing communities that the schoolhouse is the last building reconstructed in such ample proportions and style as to be in harmony with the improved condition of the country. This does not shew the true spirit of intelligence-or even exhibit ordinary sagacity ; for an intelligent and far-seeing community will look first after the education of the children. The condition of a school-house and the school in a neighbourhood reveals more of the character of that neighborhood than is generally supposed. In many districts, the people are abundantly able to build, but they do not seem to feel the need. We hope they will arouse themselves at once, and that many new school houses will be the result. - Northwestern Home and School Journal.

## OUR RURAL SCHOOL HOUSES

In all our travels we have found but very few that should not be indicted and burnt! Small, pent up, unventilated, and furnished with back-breaking benches, they are as uninviting to the child as a prison, and should never be entered with either its own or any intelligent parent's consent. But this is not all ; the exterior is almost universally repulsive. Think of an old bald red school house, when there are so many pleasing forms and colors that are just about as cheap. Think too of the location of most of our school-housesstuck down in some low, quaggy spot, where it is impossible for children to be healthy, or up in bold relief on some barren knob, without a suitable enclosure, and without either a shade tree or a flower-bed any where near. There it stands-the old red, or unpainted shanty-reared by stupid, stingy tax-payers, who see the advantage of building good barns for their horses, and cripple the bodies, and cramp, and stint, and disease the minds of their children, because they have no apparent cash value in the market!-a humiliating evidence of the short-sighted folly of the parents of our youth, and a burning shame and disgrace to the barbarian sentiment of the country.-Wisconsin Farmer.

## 4. ORNAMENTAL TREES SHOULD BE AROUND THE HOUSE.

Around every dwelling, there should be a plantation of ornamental trees, oaks, elms, maples, firs, and, indeed, all the various species of indigenous trees with which Providence has so beneficently blessed our land. Nothing adds more to the beauty and desirableness of a country residence than the presence of this splendid creation ; even the humblest cottage derives a sort of elegance from them and becomes an object of interest by the mere charm of association. Many of our forest trees, of the deciduous kind, are unsurpassed in elegance and are easily obtained and propagated so as to place them within the reach of every person. The elm is a vigorous and rapid grower ; so, also, is the oak, in all its species, the maple and the glossy beech. Of shrubs and evergreens, there are innumerable varieties, all of which bear transplanting, and flourish vigorously on almost every description of soil.

## DR. NICHOLAS MURRAY (KIRWAN) IN COLLEGE.

Dr. Murray pursued his collegiate course at Williamstown, during the presidency of that acute and accomplished critic, the Rev. Dr. Griffin. In his fourth year he was brought into more immediate contact with the venerable President, whose duty it was to examine and criticise the written exercises of the graduating class. Dr. Murray, when a young man, and even down to the day of his last illness, wrote a free, round and beautiful hand, and the exercise at this time which was to undergo the scrutiny of his venerated preceptor, had been prepared with uncommon neatness and accuracy, Dr. Griffin was accustomed to use a quill pen with a very broad nib. Introduced into his august presence, young Murray, with a becoming diffidence, presented his elegantly written piece for the ordeal. The discerning eye of the President passed quickly over the first sentence, and with a benignant look he turned to his pupil, and said in his peculiar way: "Murray, what do you mean by this first sentence?" Murray answered blushingly : "I mean so and so sir." "Then say so, Murray."-and, at the same time, drew his heavy pen through line after line, striking out about one-third of it.

Having carefully read the next sentence, the inexorable critic again inquired: "Murray-what do you mean by this?" He tremblingly replied: "Doctor, I mean so and so." "Please, just say so,"striking out again about one-half of the beautifully written page.

In this way, with his broad nib, (which made no mean mark,) he proceeded to deface the nice clean paper of the young collegian, so that at the close of the exercise the erasures nearly equalled all that remained of the carefully prepared manuscript.

This trying scene was not lost upon Murray. He considered it one of the most important events of his college course. It taught him to think and write concisely; and when he had any thing to say to SAY IT, in a simple, direct, and intelligent manner. Indeed, much that distinguished him as one of our most vigorous and pointed writers may be attributed to that early lesson, "Say so, Murray."Correspondence of New York Observer.

Remarks. -The above containsan important lesson for teachers of composition. Excessive wordiness is the great fault of young writers. Many a composition of four pages might easily be condensed into a dozen lines without the loss of a single idea. It also contains a hint to contributors. Lengthy articles can easily be reduced to proper dimensions by using the " broad nib" of Dr. Griffin. A good rule for composing is to have something to say and then say it in as few words as possible. Then review, striking out every superfluous word or sentence.-Ohio Educational Monthly.

## 6. COLLECTION OF SCHOOL RATES.

the chief superintendent of education for u. c. (appellant) in the matter of m'lean $v$. farrell.
School Taxes.-Right to collect after the expiration of the year.Appeal from the Division Court, County of Elgin.
Held, on appeal by the Chief Superintendent of Education, that a collector of school taxes might in 1861 collect by distress the taxes for 1859 and 1860 , not having made his final return of such taxes in arrear, and belng still collector; and
Semble, that in this case the plaintiff, who complained of the seizure, having led to it by his own conduct, the proceeding should in the Division Court have been upheld at all events.
This was an appeal under "The Upper Canada Common School Act," Consol. Stats. U. C., ch. 64, sec. 108, from a judgment of the Judge of the County Court of Elgin, by the Chief Superintendent of Education

The action was brought in the Division Court, for selling a cow belonging to the defendant, for the payment of school taxes. It appeared that the seizure was made for school taxes for the years 1859 and 1860. Defendant swore that the rate-bill was given to him, as collector, in 1860 , to collect, as the rate for 1859 : that he went to the plaintiff, who promised to pay in a few days; but put him off from time to time, until at last he was compelled to sell. It was objected at the trial that the taxes imposed in 1859 and 1860 could not be collected in 1861. The warrant was produced, and shewed that the plaintiff was taxed in 1859 for school taxes, $\$ 673$; and in 1860 , for $\$ 4020$. The learned judge held that the defendant being functus officio so far as these taxes were concerned, the sale was illegal ; but considering the plaintiff's conduct had been unreasonable, he gave judgment in his favour for $\$ 11 \mathrm{only}$, being the amount for which the cow had been sold, without costs.
R. A. Harrison, for the appeal, cited Consol. Stats. U. C., ch. 64, sec. 27 , sub-sec. 2 , sec. 127 ; ch. 55 , sec. $93-112$; Newberry $v$. Stephens et al., 16 U. C. R. 65 ; Chief Superintendent of Schools v. McRae, 12 U. C. R. 525.

No one appeared on the other side.
Robinson, C. J., delivered the judgment of the court.-We do not see why Newberry $v$. Stephens (16 U. O. R. 65) should not govern this case, but we have not the case fully before us on the evidence. Was the defendant a collector of the school trustees only, or a township collector? It does not appear whether the township collector had or had not made up his tinal return for 1859, when he acted in this matter. The defendant was collector, it seems, when he seized and sold the cow, and when these rates were due. It is not shewn whether he sold for the rates of 1859 only, or for those of 1860 also. Either way, the object of the act is to prevent the collector, after he has made his final return and stated his inability to collect any certain assessment in arrear, which would lead perhaps to some proceeding of another kind being taken for collecting the money, from going on and collecting the arrear himself, and thus producing confusion by a double proceeding. Here it does not appear that any final return of this tax had been made as an arrear incapable of being collected in the ordinary manner, and we do not see why the collector might not go on and make it; and at any rate in this case, as in others in the division court, the judge could give such judgment as law and equity might require, and so might have upheld a proceeding to which the plaintiff's own conduct and the indulgence shewn to him seem to have led.

We reverse the judgment, but do not give costs of the appeal.
Appeal allowed, without costs.

## III. Biongraphial Sketfet.

No. 17.-CORNELIUS CONWAY FELTON, Esq., LL.D.
Born at Newbury, Mass., November 6, 1807, died at Chester, Pa., February 26, 1862. He graduated at Harvard in 1827, and after five years teaching, partly as tutor at Harvard, he in 1832 became College Professor of Greek at that institution; and in 1834 he was appointed Eliot Professor of Greek Literature. That post he resigned two years ago, being chosen President of the University. His literary labors have been various, consisting largely of contributions to the journals of the day, North American, the Christian Examiner, and the New American Cyclopedia, as well as lectures and addresses. His best known works are his editions of Homer, and of some of the works of Æschylus, Isocrates, and Aristophanes; he he also composed a Greek Reader. He assisted Longfellow in the compilation of the 'Poets and Poetry of Europe,' and translated and edited several valuable European books, chief of which may be mentioned, Menzel's German Literature and Guyot's Earth and Man. His labors for education were not confined to his own college, he was a member of the Massachusetts Board of Education, a regent of the Smuthsonian Institution, and was warmly interested in popular education. He died of enlargement of the heart, not yet old in years, though old in labors and in honor.

## No. 18. -Rev. THOMAS HARTWELL HORNE, B.D.

The author of Horne's Introduction to the Bible, died January 27 th, at the age of 81 . His first work was a little treatise issued in 1800, written when he was only 18 ; he had therefore been an author over 60 years. Allibone lists 41 books published by him, beside which he wrote numerous sermons and articles for reviews, etc.

## No. 19.-PRINCE WINDISCHGRATZ.

'Two of Europe's most famous political characters have recently died at an advanced age, both having taken an active part in the contest with the first Napoleon; identified themselves thoroughly with the absolutist interest, and lived to see a new generation trample upon the fabric constructed with so much labor by the Congress of Vienua. One was an Austrian warrior-statesman ; the other a diplomatist. Prince Windischgratz was born in 1786, enjoyed the unenvied reputation of having been the greatest bombarder of civilized capital cities in his day. He was a descendant of the famous Wallenstein, and a genuine aristocrat. In 1813 and 1814 he was actively engaged in the war by which Napoleon was driven out of Germany and expelled from France. But all his laurels withered in the Hungarian campaign of 1849, and since then he has lived in retirement, having declined the office of Governor of Bohemia tendered him by the Austrian government. As the commander who ordered the execution of Robert Blum, his memory will be held in little respect by liberals of Europe.

## No. 20.-COUNT NESELRODE.

Count Neselrode had reached the age of eighty-two years at the time of his death. He was born on board a Russian frigate in the port of Lisbon, and baptized in the Protestant faith. Resigning early military life for diplomacy-the profession of his father and grandfather-he gained the esteem of Alexander I., and after the war of 1812, was entrusted with the bureau of foreign affairs. In 1814 he signed the capitulation of Paris, by which Bonaparte was expelled from the government, and took a prominent part at the Congress of Vienna. The influence of no single mind was more felt in European politics than Neselrode's for the next forty years; but the charm of Russian superiority, which he conjured up with so much effect, was broken by the Crimean war; and it is a curious instance of the law of recompenses that this veteran diplomatist should have been employed to negociate the next great treaty of Paris, in 1856, by which the Holy Alliance arrangement was declared to be broken up, and Russia reduced to a condition of only second among equals. Neselrode was one of the richest subjects in Europe.

## IV. æapers nut elatural chistory.

## 1. THE SEAL FISHERY OF LABRADOR.

From a recent article in Harper's Magazine, entitled "Three Months in Labrador," we gather the following information respecting one of the most important industrial pursuits of the North country :

The seal fishery of Labrador is valued at $\$ 1,500,000$ per annum, and is wholly prosecuted by Newfoundland vessels, with the excep-
tion of perhaps a dozen that sail from Canada and other Provinces. The hunting ground lies between the 49th and 52d parallels of latitude, and the season of catching extends from March to May, inclusive. The average fare of successful vessels is two thousand seals, though as many as eight thousand have been taken ; but of upward of four hundred vessels that yearly engage in sealing not more than sixty make remunerative voyages, and many suffer heavy losses. Hence the business is altogether a lottery. Nevertheless, the chances of large gains are so seductive that sealers' berths, in vessels "up for the ice," command a premium of from $\$ 8$ to $\$ 20$. The meu so engaged obtain their outfit (which includes clothing, guns amunition \&c, ) on credit, the cost of which is deducted from their earnings at the end of their voyage; and they not unfrequently find a balance of $\$ 125$ in their favour at the close of the season. Yet they are fortunate if, after their accounts are squared, they do not find themselves in debt to the vessel or at least with emty pockets. The expense of the cutfit is borne by the owners of the vessel. The captain receives no wages, but is allowed a tare of ten cents on every seal caught. When this is deducted one half fare is divided among the crew, and the other half falls to the owners. The average price per seal is $\$ 350$. Consequently, a fare of two thousand seals, worth $\$ 7,000$, yields to the owners and crew $\$ 3,325$ each, and to the captain $\$ 350$.
Sealing vessels are sheathed with iron and extra planked about the bows to protect them from the ice. On reaching the ground they are warped into channels cut through the ice, where they lie snugly moored until warm weather breakes it up. Then the sealers, singly and in small parties, each man armed with a heavy iron-spiked bat, and muffled to his eyes in furs, go forth in quest of victims. These lie quietly sunning themselves near their breathing holes, often a hundred together, uttering doleful cries and frog-like croaks. Upon some hammock a sentinel is ever on the alert to warn of approaching danger. But the hunters, creeping stealthily, and taking advantage of the wind and inequalities of surface, rush upon them at the first alarm, dealing death-blows right and left among the affrighted herd, who wriggle hurriedly over the ice, and tumble floundering into their holes. The old seals generally escape as their movements are wonderfully quick ; but many of the young are killed. These are dexterously "sculped," stripped of their blubber and pelts, which come off entire ; the bloody carcases are left to glut the starveling bears and Arctic foxes, and the pelts rolled up and dragged away to the vessel. After the ice breaks up the seals are shot from boats in open water, where they are found disporting.
There are various kinds of seals, among which are the harbor, ranger, jar, hood, doter, bedlamer, harpe, blue and square flipper; differing as greatly in size and physiognomy as nembers of the human family. There are canine and feline looking seals ; seals with round smooth heads cropped like a prize-fighter's, and seals with patriarchal beards and long flowing locks; pensive-looking seals, and seals fierce and long tusked; little seals three feet long, and monsters upwards of eight feet long, weighing a thousand pounds. Selah! The hood seal when attacked throws up a thick bullet.proof hood or shield before its face, and whichever way a gun is presented this defence is always opposed, the animal moving dexterously from side to side with every movement of his assailant. An effective wound must be given directly under the ear, and it requires an expert marksman to hit him there. The harpe is most esteemed, and commands a market price of $\$ 7$ to $\$ 8$. He is a first-class pugilist, and always shows fight, rising on his hind flippers, dodging the bat skilfully, and often seizing it from his assailant's hand. He is very tenacious of life, and, when worsted, frequently feigns death. At such times the unsuspecting sealer, stooping over to "sculp" him, is liable to serious injury. Sometimes they have been completely disembowelled.
Seals whelp in March, and suckle their young. They are in good condition at all seasonis, but are seldom taken after July as they migrate to more northern regions, returning in December. In early summer they are caught in strong large meshed nets. They constitute an important article of food to the settlers and Esquimaux, and to the latter are indispensalle. The blubber is exceedingly fat, and being cut into stripes and thrown into vats, a large quantity of oil is obtained by natural drainage. The residue is tried out by heat. It is extensively used for machinery, both in Europe and the United States, but is sold under a different name. Its value is about fifty cents per gallon.

## 2. THE SEALS OF SPITZBERGEN.

A full-sized Spitzbergen seal, in good condition, is about nine and a half or ten feet long, by six or six and a half feet in circumference and weighs six hundred pounds or upwards. The skin and fat amount to about one-half the total weight. The blubber lies in one layer of two or three inches thick, underneath the skin, and yields about one-half of its own weight of fine oil. The value of a seal, of
course, varies with the state of the oil market all over the world; but at the time of which I write, oil being unusually cheap, they only averaged five or six dollars apiece ; but still, the fact of the animals being of some use contributed to render the chase of them much more exciting, as nothing can be more distasteful or unsatisfactory to the feelings of a true sportsman than taking the life of anything which is to be of no use when dead.
From what I have heard, I am inclined to suspect that a good many of the shipwrecks which happen in Spitzbergen are caused wilfully, in order to defraud the insurance offices. These vessels are principally insured in Hamburg, and, I believe, the rate of insurance is as high as seven per cent.; although one would think that even that was little enough for the unavoidable risk of such a dangerous voyage, without taking into consideration the impunity with which such nefarious proceedings as those to which I have alluded are perpetrated.

## V. Gatisctuawous.

## 1. MAKE YOUR HOME BEAUTIFUL.

Make your home beautiful-bring to it flowers, Plant them around you to bud and to bloom; Let them give life to your loneliest hours, Let them bring light to enliven your gloom.
Make your own world-one that never sorrowed, Of music, sunehine, and glad summer air,
A home-world whose forehcad care never has furrowed,
And whose cheeks of bright beauty shall ever be fair,
Make your home beautiful-weave round its portal
Wreaths of the jessamine and delicate sprays
Of red-fruited woodbine, with joy immortal,
That bleses and brightens wherever it strays;
Gather the blossoms, tou-one little flower,
Varicd rebbena or sweet migronette,
Stillmay bring bloom to your desolate bower Sill may be something to love and to pet.
Make your home beautiful-gather the roses That hoard up the sunshine with exquisite art ; Perchance they may pour as your darkest day closes, That suft summer sunshine down into your heart; If you can do so-oh, make it an Eden Of beauly and gladness--remember 'tis wise, Twill teach you to long for that home you are needing, That heaven of beauty beyond the skies.

Make your home beautiful-sure 'tis a datyCall up your littie ones, teach them to walk
In hand with the wandering Ancrel of Beauty.
Encourage their spirits with nature to talk,
Gather them round you and let them be learning.
Lessons that drop from the delicate wings
Of the bird and butterlly--cver returoing.
To Him who has made all these beautiful things.
Make home a hive where all beautiful feelings C'inster like bees, and their honey dew bring;
Make it a temple of holy revealing-, And love its hright angel with 'shadowing wing,' Then shall it be, when, atar on life's billows, Wherever your temest tossed children are flung, They will lorg for the shade of the home 'weeping willow,' And sing the sweet songs which their mothers had sung.

## 2. MAKE YOUR HOMES BEATIFUL.

Tho man who is devoid of local pride, has very littlo pleasure in this world. The man who does not make an effort to adorn his home, and thus assist in making the whole city attractive, is not a good citizen. The providing of the common necessaries of life, does not comprise the care of a family; food and raiment, shelter from the heat and protection from the cold, are not really the essentials of happiness. Ail these it is the duty of every man to provide. When he fails to do so, there is a law to compel him-and when he is not able to gather these comforts for his family, there is a charity made sacred and incumbent by mature as well as necessity, that is always sacred and incumbent to bestow these on the needy. But it is the beautiful that prompt home really happy, the little acts that please the eye. A twig cultivated to bear a single bud, often delights the eye and overflows the soul with nore pleasure, than a glutton's dish or a vain fool's attire. It is the beautiful that elevates man. What a world this
would be, were it not for the beantiful? There would be no love to cheer and chasten, no devotion to inspire confidence, no hope to establish faith in one another. Without the beautiful, the world would be, if not a wild chaos, a reality too stern for man to endure. It is the beautiful that dissipates this sternness. A home made beautiful by contentment, is of itself adorned and made more attractive than those where liveried hands raise the latch, and conduct you through halls of gilded brightness to chambers of satin and damask. Those are not beautiful homes to our conception of the beautiful, unless love lights the flame on the altar, and peace imparts its sweet incense to all within. Added to this, the hands must contribute their share towards creating and multiplying the beautiful in this world. And this is easily accomplished. It costs nothing but time, involves only a little patience, and the beautiful springs around us like the magic creations of a fairy dream.-Exchange.

## 3. THE BEAUTIFUL FLOWERS !

Why does not everbody have a geranium, a rose, or some other flower in the window? It is very cheap, next to nothing if you raise it from seed or slip, and is a beauty and a companion. As charming Leigh Hunt says, it sweetens the air, rejoices the eye, links you with nature and innocence, and is something to love you in return; it camot hate you, it cannot utter a hateful word, even for neglecting it, for though it is all beauty, it has no vanity; and living, as it does, purely to do you good and afford you pleasure, how can you neglect it?

## 4. THE NECESSITY OF RECREATION.

Games, gayeties, sports, spectacles, there will be, as long as men have limbs, eyes, or ears. The development here is as natural as it is in the arts. You might as well talk of extirpating music and painting, as of driving the common amusements out of the world. Now, there are abuses of these things. What are we to say of the abuses? "Let them crush down and destroy the things themselves," do we say? But they cannot. Then let them be cut off. There is really nothing else to be done. Elevate, refine, purify the public amusements. Let religion recognise and restrain them. Let it not, as is too common, drive them to license and extravagance; but let it throw around them its gentle and holy bonds, to make them pure, cheerfu, healthful, helpful to the great ents of life. What a blessed thing for the world were it, if its amusements could thus be rescued, redeemed, and brought into the service of its virtue and piety!

## 5. ON WOUNDING THE FEELINGS OF OTHERS. <br> translated from the italian.

The ideal life of man is composed more of recollections and anticipations than of actual sensations, so that lee camnot succeed in piercing the shadows of the future, except with the torch of the past in his hand.

The thought of the good we have possessed, and may possess, becomes pleasing to us.

To prove with what sweet sensations the memory of things dear to us fills the mind, let us recall the story of that English merchant, established at St. Petersburgh, who, animated by the strong love of his country, had a large quantity of earth brought from Great Britain, as ballast to ships. With this he had the paths in his garden covered, so that when walking along them he might have the pleasure of feeling he was upon English ground.

Hence one part of politeness consists in so acting and speaking as to excite pleasant and agreeable recollections in the minds of others. For to be reminded of misfortunes is painful, unless there results from the recollection such courage as will enable us to overcome them.

Thus it is the height of rudeness so to talk that mournful or disagreeable recollections may be excited in the minds of the listeners. For example, to remind a husband of the misconduct of his wife, a merchaut of his former bankruptey, a gentleman of an insult that he had received, or a mother of the loss of her son.
And therefore the custom that olbtains in England is far from a polite one, which prescribes that the birthday of the Queen shall be celebrated by as many discharges of cannon as she has years of age. This public and solemn calculation surely cannot be pleasing to those queens who have passed the brightest years of their lives, and are progressing towards old age. Such a reminder is rather a severe moral lesson than an act of homage.
Hence it may be perceived, that the custom of wearing mourning is not without its inconveniences. In fact, while medicine and philosophy would both advise the bereaved mother to put away from her thoughts the image of her lost son, so that the wounds of her soul might cicatrize, custom compels her to put herself in mourning
which recalls the memory of the dead at every moment. At a period when family affections were stronger than at present, or, it may be, when the wish to make a pompous display of them was greater, the laws were constrained to mark the limits of mourning, so that the public sensibility might not be continually wounded by Iugubrious ideas.

The degrees of rudeness correspond to the degrees of grief attached to the recollections excited by the rude specch or action. Thus, when a prince received the ambassadors of a friendly nation in an apartment decorated with pictures of the battles in which they had been defeated, he certainly conmitted a most unpolite act. But when Albonius, King of Lombardy, after having drunk from the skull of Cumbund (whom he had beheaded), the father of Rosamond, who had since become his wife-when he, having thus drunk, passed the skull full of wine to his wife, saying, "Drink with your father, Rosamond," he showed himself not only rude but barharously cruel.

Two guns, however different in size, do not require, in order to be fired, different quantities of heat-a single spark suffices for both. For the same reason, the smallest act may arouse the most mournful feelings. When Dionysius, fallen from the throne of Syracuse, was living as a schoolmaster at Corinth, one of the inhabitants of that city went to him, and stopping in the threshold of the door affected to shake his robe, so as to show that he carried no poignard concealed about his garments. Now, as this was the action with which they always approached the tyrant, it therefore reminded Dionysius of his tyramy, the hatred of the people, his lost throne, and his present abasement.

As the same act or the same saying may awake in one person pleasant memories, and in another painful ones, so it is necessary to know the sentiments of the person with whom you are conversing, in order that you may not be exposed to the danger of offending or embitteriug him without knowing it. Whoever looked Caligula full in the face mortally offended lim, because such an act reminded him of the baldness which he was anxious to conceal from all. Whoever looked Scipio Africanus full in the face gave him the greatest pleasure, because his baldness revealed a warlike scara monument of his glory and his valour.

Finally, politeness forbids us to revive, or to reproach others with those faults which a long penitence has cancelled. The civil laws theinselves, in order to preserve peace between citizens, condemns these reproofs, even wheu founded on truth, and establish, although too absolutely, the principle that " the truth of a libel does not excuse it."-Melehcoise Gioio-Il nuova Galateo.

## 6. ESTIMATE OF PUBLIC LIFE BY PUBLIC MEN.

Many have left the calm and dignified pursuits of the scholar for the dim of public life; and teachers are not wanting who sigh for the distinctions conferred by civil and military office. It would be well for worthy teachers, afflicted with such human weakness, to cultivate a higher esteem for their own sublime duties. Some one remarks of our great Arnold, "It is a pity that Arnold, who is fit for a statesman, should spend his days in teaching boys." His noble reply was, "It is greater to be a maker of statesmen than to be a statesman!" For one, we are not willing to admit that there can be a higher office in any State than that of a teacher who devotes himself wholly to his work.

Says Dr. South, one of England's greatest divines, "I look upon an able, well-principled school-master as one of the most meritorious subjects in any prince's dominions." And our own Channing writes that, "To teach, whether by word or action, is the greatest function on earth." Such thoughts should keep down any unholy ambition-that sin by which angels fell-when it comes to the teacher in his weaker hours, and makes him think of leaving his charge for the thorny path of political life.

We may further be instructed by the learned Guizot, the great French statesman, the ablest of Louis Phillippe's ministers, whose morals were as pure as his views were broad and comprehensive. In the third volume of his Memoirs, just published, he gives the following estimate of the insufficiency and hollowness of public life. Is is a modern commentary on the "Vanity of Vanities" of the wisest of ancient monarchs :-
"I have been strongly attached to political life, and have applied myself to it with ardor. I have devoted to public duties, without hesitation, the sacrifices and efforts they demauded from me ; but these pursuits have ever been far indeed from satisfying my desires. It is not that I complain of the incidental trials. Many public servants have spoken with bitte mess of the disappointments they have experienced, the reverse; they have undergone, the severities of fortune and the ingratitude of men. I have nothing of the kind to say, for I have never acknowledged such sentiments. However violently I may have been stricken, I have never found men more blind or ungrateful, or my political destiny more harsh than I ex-
pected. Alternately, and in great abundance have been its joys and sorrows ; such is the law of liumanity. But it has been in the happiest days, and in the most brilliant success of my career that I have found the insufficiency of public life. The political world is cold and calculating ; the affairs of government are lofty, and powerfully impress the thought; but they cannot fill the soul, which has often more varied and more pressing aspirations than those of the most ambitious politician. It longs for a happiness more intimate, more complete, and more tender than that which all the labors and triumphs of active exertion and public importance can bestow. What I know to-day, at the end of my race, I felt when it began and during its continuance-even in the midst of great undertakings, domestic affections form the basis of life; and the most brilliant career has only superficial and incomplete enjoymente, if a stranger to the happy ties of family and friendship."

## 7. DAVID AND HOMER-CONTEMPORARIES

David and Homer were cotemporaries. Both were poets of surpassing genius; the one the sweetest singer of Israel, the other the epic bard of Greece. Both flourished in the same rude era; the former dwelling on the hills of Judea, the latter wandering over the mountains of Thessaly. Both breathed soul-stirring strains. The one in Hebrew psalmody, the other in Heroic verse. Both sang in devotion to the Deity ; the one in out-gushing praises of Jehovah, the other in lofty eulogiums of demi-gods.

Both alike wrote in elegant diction,-displayed unparalleled versatility of thought, searched out the fountains of nature for striking metaphors, exhibited the depth of eloquence, exhaled the soul of poetry.

Both were religious; but the one reverenced the thunders of Sinai, and the other adored the thunderer of Olympus. David sang of that God who had led the hosts of Israel ; Homer praised the gods who fought with men around the walls of Trcy. David applauded the deeds of virtuous men; Homer praised the acts of demons. Darid's Gord was the cource of purity ; Homer's gods were slaves of infamy. David's heroes were the good and benevolent; Homers heroes were the vicious and despotic. David was a disciple of the pure religion ; Homer was the slave of superstitious idolatiy.

Such being the case, let the christian teacher in christian schools, tell his pupil so. Where Homer is read, there, also, should David le.

## 8. RECENT GEOGRAPHICAL NOTES.

(Condensed from the Independent).
Dr. Monat, of the Bengal army, communicates to the Royal Geographical Society information respecting the natives of the Andaman Islands, a mountainous and volcanic group in the Bay of Bengal. The natives have been deemed ferocious cannibals; but, though warlike, they are not caunibals, nor utterly savage. Their average is 4 ft .9 inches. They do not appear to be allied to the Papuans, or to the Negroes, or to any known race. Prof. Owen says that they show peculiarly excellent physical development, except in size.

It appears that Messrs. Burke and Mills, who perished recently in an exploration of Australia, died through the neglect of officials who broke up a frontier depot of provision arranged for them, because they did not believe that the explorers could get through the wilderness. They did, however, struggle through, and then died of want.

Capt. R. F. Burton has been appointed British consul at Fernando Po, and has explored the Abbeokuta river, which he found navigable to a place called Aso, where a ridge of rocks crosses it.

When the missionaries Krapf and Rebman, in 1847 , reported the existence of Mts. Kenia and Kilmandjaro, in the south-east part of Central Africa, their report was doubted by some whose theory that there is no central range of mountains there was danaged by the statement. A recent survey of Kilmandjaro by triangulation from Mombas and partial ascent of the mountain gives better knowledge of it. Baron Von der Decken and Mr. R. Thornton, the latter formerly with Livingstone, spent nineteen days in survey of the mountain, ascending it 8000 ft ., and ascertaining its height to be $21,000 \mathrm{ft}$., the upper 3000 ft . being covered with snow. The probability seems to increase that this range is the source of the Nile.

A French traveler, Tremaux, has returned from an exploration of Asia Minor, in which he determined the sites of forty Greek cities, examined their remains, and obtained many valuable antiquarian relics, inscriptions, coins, etc. He reports the city of Perga, in Pamphylia, in a wonderful state of preservation, with its original walls and towers standing, and rich porticoes and public buildings so far preserved as to afford unusual opportunity for the antiquarians.

Evidence is reported to be accumulating against the accuracy of DuChaillu's estimates of distances and locations in his rambles in Western Africa. Some Englishmen are organizing an expedition into that region to verify or correct his statements.

A manuscript map has been discovered which shows that the northwest coast of Australia was discovered in 1601 by a Portuguese named Manoel Godinho de Heredia. This date is five years earlier than the earliest previously-known discovery by the Dutch. The king of Portugal has conferred the honor of knighthood of the Tower and Sword upon Mr. R. H. Major, of the British Museum, for making this discovery.-Illinois Teacher.

## 9. PARROTT GUN.

The parrot gun is named after its inventor, Mr. R. P. Parrott, of West-Point foundry. The Scientific American describes it as " a cast-iron muzzle-luading rifled gun [i.e cannon] with a wrought-iron reïnforce shrunk on, and with its breech made of a separate steel pin," which is made into a screw and screwed tightly in to close the bore at the rear. We some times read in the papers of James' gun and Sawyer's guns : those men only invented projectiles to be used in any rifled cannon.

## 10. THE CANADIAN DEPARTMENT AT THE INTERNATIONAL EXHIBITION.

The Commissioners and their contractors, Messrs. Simpson \& Co., are very busy in setting the Canadian Department to rights, but the lateness of their appointment and arrival leaves them a great deal to do to be ready for the 1st proximo. The partitions and a portion of the counters are up, and the framework of the great timber trophy is rising fast. Upon and around this will be arranged the finest collection of the woods for building, drc, ever shown at any similar exhibition. At the base will be ranged sections of some immense trunks-the largest a black walnut, 4 feet 8 in. or 4 feet 10 in. in diameter without its thick bark, which adds six or eight inches more to its width. This tree, reckoning by the rings of growth, is about 320 years old.

Another white oak is of a still greater age, though not of so large growth. Both of these come from the western district of Upper Canada. Next we have huge square logs of commercial export timber, collected in the port of Quebec by Messrs. Patton \& Co., including various kinds of pine, \&c. Above them will be ranged planks, several of them showing a width of 48 to 50 inches. One of these is a beautifully seasoned white pine, sent by A. Bronson, Esq., of the township of Bingham, C.W. This is 50 inches wide without any wane, was cut from the tree 50 feet from the ground, the tree measuring 22 feet in circumference and 120 feet to the first limb.

Besides these very fine specimens of woods fitted for commercial and practical uses, the Commissioners have brought over specimens of the more ornamental woods, polished and varnished, either as boards or veneers. They have also brought over specimens of smaller growth as a scientific collection for the use and instruction of botanists, accompanied in many instances by the twigs and leaves as requested by Her Majesty's Commissioners. A collection of 490 native plants, gathered in the neighbourhood of Hamilton, C.W., by Miss Kate Crooks, will form part of this section. The collections of woods have been made from six different parts of Canadathe western, central, and eastern parts of Upper Canada; the Ottawa, central, and eastern parts of Lower Canada. Two collections of medicinal herbs and essences from thence are also sent.

Grouped with the woods, the products of the forests, are to be those of the waters, including preserved fishes sent by Mr. Passmore of Toronto, and a collection of fishes by Mr. Commissioner Taché, packed for export, together with oils, porpoise leather, \&cc. A small collection of Canadian furs, dressed but unmanufactured, will also be exhibited.

It is hardly necessary to say that the collection of economic minerals brought over by the chief Commissioner, Sir W. E. Logan, will again vie with that found in any other department as a complete representation of the mineral wealth of the country. Those who know, declare this to be a better collection than that made in 1851 for the first great London Exhibition, or that in 1855 for the Paris Exposition Universelle. Among the new things will be nine cwt. of copper ore from the great Acton Mine, and petroleum from the wonderful oil wells of the peninsula of Upper Canada. We should, perhaps, say would have been, had not an almost causeless panic caused the Commissioners to turn the petroleum out of the building. Though the public will thus be deprived of an opportunity of examining it, doubtless scientific men and the proper jury will be enabled to test its qualities. It bids fair to become a most important staple export of Canada. Mr. Thomson, of Toronto, had sent over machines for making gas from and heating houses with this oil, but
there is danger that the iron rule of the Commissioners will prevent it from being properly tested.
Sir William Logan's catalogue, with Dr. Hunt's (Chemist of the Canadian Geological Survey) contribution, forms a very valuable practical handbook to the geology of Canada.
The farm prodacts of the colony will be well represented by 120 to 150 samples of cereals, seeds, \&rc., gathered in various portions of the Province upon a somewhat similar principle to that adopted in collecting woods. -Canadian News.

## 11. THE MUNIFICENT GIFT OF MR. PEABODY.

The munificent donation of Mr. Peabody to the poor of Loudon is the subject of general eulogium, and certainly is an event calculated to reunite and cement the feelings of the British people towards their North American cousins, from whom they have been to a certain extent of late estranged. It is one of those instances that prove there is still in the American bosom something like sympathy with the country whence they derive their origin, their political institutions, and the essential elements of their greatness. The Liverpool Daily Post justly characterises the acts as one " that goes far to redeem an age from sordidness, and render it illustrious throughout time." He further dwells on it thus:-
"The particular destination of Mr. Peabody's splendid endowment is dictated by feelings of a poetical and natural propriety which the whole world will appreciate. Mr. Peabody gives to London because London has been the scene of his business achievements-because, in a word, he made his money there; he gives to the poor of London because, as those always are who come from new countries where there is almost literaliy no poverty, he was much struck when he arrived in London, a stranger, with the plentiful neediness of its population. His sympathies have not been blunted by years of residence, and he still sees that the miserable squalor and degradation of the Metropolitan poor form a gulf into which even his monolight of benevolence might sink and be seen no more. It has always been a leading idea of Mr. Peabody's mind to devote a proportion of his wealth for the benefit of places which the accidents of life and the changes of business have associated with his career. He was born at Danvers, Massachusetts, and in that town erected some years since an institute and library, which have gone on flourishing and are a real boon to its townsmen. Twenty years of his life were spent in Baltimore, and there he founded, in 1857, a large institute devoted to science and the arts, with the addition of a free library. The building is ready, but the dedication is delayed, like so many other good things, by the unhappy differences that sever in twain the great nation which Mr. Peabody has long and worthily represented in England, and which we trust he will live to see happily re-united. That his great gift to London is not an institute, but a colossal and perpetual alms to the poor of a city in which poverty is always abundant, shows how healthy and natural are the impulses which this merchant prince has kept unsullied by the cares and uncorrupted by the successes of his busy life. Had he been a less original and genuine man, he might have merely imitated such noble benefactors as Wm. Chambers and Wm. Brown by adding to our popular literary institutions, of which on the best model we have too few. But he was true to his American instincts. He bore in mind the revulsion of feeling which he had experienced, and which other Americans and many British Colonists have often confessed to on seeing in English streets the palpable proofs of wide-spread destitution. He resolved that his in memoriam gift to London should be a benefaction to the poor.

## 12. BRITISH GENEALOGICAL TABLE.

Table shewing the lineal descent of Queen Victoria, from William the Conqueror, and from Egbert the first sole monarch of England.*

## I. LINE FROM WILlIAM tHE CONQUEROR.

## 1. Victoria, only daughter of

2. Edward, Duke of Kent, fourth son of
3. George the Third, eldest son of
4. Frederick, Prince of Wales, eldest son of
5. George the Second, only son of
6. Georae the First, son of
7. Princess Sophia, daughter of
8. Princess Elizabeth, eldest daughter of
9. James the First, only son of
10. Mary, Queen of Scots, daughter of
11. James the Fifth of Scotland, son of
12. Queen Margaret of Scotland, eldest daughter of
13. Elizabeth of York, (Queen of Henry the Seventh of England) and eldest daughter of

- Prepared from the paper of the late Mr. J. Hughes of Brantford, by Mr. Jamee McFarland, Teacher of Scheol Section No. 6, South Dumfries.

14. Edward the Fourth, eldest son of
15. Richard Plantagenet, son of
16. Lady Anne Mortimer, daughter of
17. Roger Mortimer, son of
18. Lady Phillippa, daughter of
19. Lionel, Duke of Clarence, second son of
20. Edward the Third, eldest son of
21. Edward the Second, fourth son of
22. Edward the First, eldest son of
23. Henry the Third, eldest son of
24. John, fifth son of
25. Henry the Second, eldest son of
26. Empress Matilda, daughter of
27. Henry the First, third son of
28. William the Conqueror.
II. IINE FROM EGBERT.
29. The line from Eabert is through the Empress Matilda, before named, who was daughter of
30. Queen Matilda, (wife of Henry the First, and) daughter of
31. Princess Margaret, (wife of Malcolm the Third of Scotland,) and danghter of
32. Prince Edward, son of
33. King Edmund, son of
34. King Ethelred, son of
35. King Edgar, son of
36. King Edmund, son of
37. King Edward, son of
38. King Alfred the Great, son of
39. King Ethelwolf, son of
40. King Eqbert, the first sole Monarch of England. MONARCHS BEFORE THE CONQUEST.

# 1. Egbert. <br> 2. Ethelwolf. <br> 3. Ethelbald. <br> 4. Ethelbert. <br> 5. Eithelred I. <br> 6. Alfred the Great. <br> 7. Edward the Elder. <br> 9. Edmund I. <br> 10. Edred. <br> 11. EDWY. 

$\underbrace{\text { Saxons. }}$

## How A.D. 1441

House of York. (White Rose.) (3 Sovereigns reigned for 44 years-both Houses.)
16. Edward the Fourth, eldest son of Richard, Duke of York, son of Lady Ann Mortimer, daughter of Roger Mortimer, son of Lady Phillippa, daughter of Lionel, Duke of Clarence, second son of Edward the Third.
Note. - Edward the Fourth was descended from Edmund, Duke of York, the fourth son of Edward the Third, as well as from Lionel his second son ; from Lionel he inherited the Throne, and from Edmund the Duchy of York, hence the House of York. In the line from Edmund, Edward the Fourth was son of Richard. son of Richard (husband of Lady Ann Mortimer,) son of Edmund, son of Edward the Third.
17. Edward the Fifth, eldest son of Edward the Fourth.
18. Richard the Third, brother to Edward the Fourth, and consequently of the same parentage.
A.D. 1485.

House of Ttdor. (5 Sovereigns reigned for 118 years.)
19. Henry the Seventh, son of Margaret Beaufort, only daughter of John, Duke of Somerset, son of John, Earl of Somerset, son of John of Gaunt, son of Edward the Third.
Note.-Henry the Seventh's father was Edmund Tudor, eldest son of Owen Tudor and Queen Katherine, widow of Henry the Fifth, hence the House of Tudor.
20. Henry the Eighth, son of Henry the Seventh and Elizabeth of York, eldest daughter of Edward the Fourth, hence in him were united the Houses of York and Lancaster.
21. Edward the Sixth, son of Henry the Eighth and Jane Seymour.
22. Mary, daughter of Henry the Eighth, and Catharine of Arragon.
23. Elizabeth, daughter of Henry the Eighth and Ann Boleyn.

## A.D. 1603.

House of Stuart. ( 6 Sovereigns reigned for 111 years.)
24. James the First, only son of Mary, Queen of Scots, daughter of James the Fifth of Scotland, son of the Princess Margaret, daughter of Henry the Seventh and Elizabeth of York.
Note. James the First's father was Henry Stuart, Earl of Darnley, hence the House of Stewart.
25. Charles the First, second son of James the First.
here interventd the protectorate of cromwell.
26. Charles the Second, second son of Charles the First.
27. James the Second, third son of Charles the First.
28. William the Third and Mary ; William the Third ; Prince of Orange, was son of Princess Mary, daughter of Charles the First; Mary was daughter of James the Second.
29. Anne, daughter of James the Second.

$$
\text { A.D. } 1714 .
$$

House of Hanover. (6 Sovereigns yet reigning, 148 years to 1862.)
39. Georae the First, son of the Princess Sophia, daughter of the Princess Elizabeth, eldest daughter of James the First.
Note.-George was elector of Hanover before he ascended the English Throne, hence the House of Hanover.
31. George the Second, only son of Gearge the first.
32. George the Third, eldest son of Frederick, Prince of Wales, eldest son of George the Second.
33. George the Fourth, eldest son of George the Third.
34. William the Fourth, third son of George the Third.
35. Victoria, only daughter of Edward, Duke of Kent, fourth son of George the Third.

## VI. Short Criticat êtotires of enoks.

- Catalogee of the Minerals, \&c., of Canada.-Montreal: John Lovell.-This publication contains a most valuable "Descriptive Catalogue of the Economic Minerals of Canada, by Sir William Logan, F.R.S., and of its Crystalline Rocks, by T. Sterry Hunt, F.R.S., sent to the London International Exhibition for 1862." Although a catalogue in form, it contains in fact a popularised bird's eye view of the geology of Canada. Each mineral and rock mentioned in the catalogue is described in untechnical language, and the part or parts of the country in which they are found, together with the formation to which they belong. Mr. Lovell, the enterprising publisher of the "Catalogue," has printed a large extra edition, so as to supply it at the unusually low price of 25 cts. per copy.
-_Life Wore.-New York: R. Carter \& Bros.-This is a reprint of one of a series of admirable books on the "Bible and Domestic Female Missions," by L. N. R., the authoress of "The Book and its Story," and "The Missing Link," which we have heretofore noticed. This book, also
styled "The Link and its Rivets," is designed to call forth not only more money but more workers, especially from the influential classes. It is therefore filled with deeply interesting facts and illustrative sketches of woman's lowly life in London, together with a narrative of the labours of the female agency, or the "missing link," employed to uplift and Christianize the unfriended poor of that great metropolis. To such influences, under Divine direction, we are no doubt indebted for the munificent gift of George Peabods, Esq., to the poor of London, which is recorded on page 76 of this number of the Journal.
——Tae Golden Rule.-New York: A. D. F. Randolph.-This is an English book. It consists of a series of excellent and entertaining stories, illustrative of the Ten Commandments, which are well calculated to produce a good effect on the minds of youth. The engravings are very good.
- Thf Gospel of Jesus Christ. By J. Addison Alexander, D.D., Princoton.-Edinburgh: Thomas Nelson \& Sons.-Although aside from our purpose in writing these notices to review theological books, we think it proper to refer to this work. It extends to 57812 mo pages, and contains a series of discourses by an eminent divine of the American Presbyterian Church on the "Gospel of Jesus Christ." These discourses have been highly spoken of by literary critics. The book is well printed. - Histomical Evidences. By the Ref. George Rawlinson, M.A. Boston: Gould \& Lincoln.-This admirable book has been hailed by the English Christian public as a most valuable contribution to the historical evidences in favour of the Bible, and especially that part of it which embodies the researches of the author's distinguished brother, Sir Henry Rawlinson, in Egypt and Assyria. The work contains eight lectures, delivered in the Oxford University pulpit in the year 1859 on the Bampton foundation, and entitled "The Historical Eridences of the Truth of the Scripture Records stated anew, with special reference to the Doubts and Discoveries of Modern Times." The Notes appended to the American edition of the Lectures are translations from the original texts, quoted by the author, which have been made for this edition, by the Rev. A. N. Arnold, an American clergyman.
-- Phlip Melancthon. By C.F. Ledderhose.-Philadelphia: Lindsay \& Blakiston.-This life of Melancthon supplies a hiatus which has been long felt in popular foreign religious biographical literature. Lives of Luther, by various English writers, are numerous; bat it is singular that only one life of Melancthon has hitherto been written in the English language-that by the Rev. Dr. Cox. The present life was originally written in German, and is translated by the Rev. G. F. Krobel, a Lutheran Minister in Pennsylvania. The book contains an excellent steel portrait of Melancthon.
-_Mayhew's Horse Doctor.-New York: D. Appleton \& Co.-Like Youatt's book on "The Horse," this work is also a standard authority in England and America, on the treatment of the horse. It contains "an accurate and detailed account of the various diseases to which the equine race are subjected; together with the latest mode of treatment, and all the requisite prescriptions, written in plain English." It is "illustrated with more than 400 pictorial representations," and will be found of the greatest value to farmers and others interested in the proper treatment of that noble animal, the horse.


## VII. extucational zuteligeme.

## CANADA.

- The Canadian Literary Institute.-We are glad to perceive from the Anuual Catalogue of this College, that its permanency and usefuluess as an institution of learning is being so well founded; and that the discipline and course of instruction are so well calculated to secure to it a character second only to that of the University of Toronto. Although depending for pecuniary support upon the pure voluntary offerings of its friends, and on the fees of the students, it lacks, in this respect-nothing. There are in attendance during the present year, 161 students. Twenty-seven of these are Theolegical students; and there are attending the higher department, 49 ladies and 60 gentlemen. The Board of Instruction at present consists of the Rev. R. A. Fyfe, D.D., Pincipal, and Professor of Theologs, and Lecture: on Moral and Intellectual Philosoply; the Rev. William Stewart, 3. A., Tutor in Latin, Greek, and Hebrew, and Lecturer on Logic; C. B. Hankinson, B S., Tutor in Marhematics, and Lecturer on Natural Science; Mrs. C. B. Hankinson, Lady Principal, Teacher in French ; Hiss P. S. Vin.
ing, Teacher in Drawing, Painting, and Rhetoric ; Miss S. H. Brown, 'Teacher in Instrumental Music. Examinations of all the Classes in the Primary and Higher Departments are held cither at the close of the term, which each study has been pursued, or at the end of the year. The Theological Classes will hereafter be examined during the second week of September, at the commencement of the Academic year. These examinations are conducted with the assistance of Committees appointed for that purpose. A daily record is kept by each of the Teachers of the recitation and deporturent of every student in the class; and this, in connection with the terminal examination, decides the position of the student on the Merit-Roll made up at the close of every term. Diplomas will be granted to those students who have pursued a full course of study, either in the Literaty or TLeological Departmeuts, and lave sustained good examinations theroon. All students are required to attend, twice every Lord's day, such church as their parents and guardians may prefer. There are two Prayer Meetings held weekly; and a Bible Class is taught by the Principal every Sabbath afternoon. Attendance at the Praser Meetings and Bible Class is optional. All students are required to attend chapel prayers every morning. There are two societies connected with the Institute,--the Adelphian, a Literary Society; nad the Judson, a Missionary Zociety. The Literary Society is composed entirely of male studente, and holds weekly meetings. The Missionary Society is composed of both males and females, and holds monthly mectinge, at which Lectures are delivered, and Essays on topics of a missionary character are presented. The Academic year commences about the middle of September. It is divided into three terms, two of 13 weeks cach, and one of 14 weeks. The first term ends three days previous to Christmas, and is followed by a vacation of two weeks. The second term commenees the second week of January, continues till the second of April, and is followed by a vacation of one week. The third tern commences about the middle of A pril, and continues till the middle of July.
——Upper Canada College-Presentation.-Yesterday (16th April) being the last day of term at Upper Canada Colloge, and being also the last occavion on which the Rev. Di. Scadding took his seat as first Clissical Master of the College, the pupils were assembled, and a number of ladies and gentlemen were present to witiess the presentation of an ad iress to hian by the pupils. Principal Cockbam was preseat on behal of the College, an I Professor Wilson on behalf of the semate of Tuicnts) Univer-sity-Dr. McCaul being unable to attend. On the usual prayer being read, the head boy, Bell, alvanced, and wit'! much goos emphasis and feeling, read an appropriate address, which concluled as follows: - "Aceept from us the accompanying tokens of remembrance. It weighel in mere earthly scales against lead or irou, they would ba of no great value, bat we confidently rely upon your generosity to weigh them by the intentions of the dunors, and to estimate them accordingly." The plate presented to Dr. scadding consisted of a very handiome solid silver ice.jat and salver, richly chased. It was manufactured by Mr. J. E. Ellis, jeweler, Kingstrect, and bore the following inscription beatifully engraved in mediaval characters by Mr. Rolph:-" Henrico. Scadling. S. T. P. C'antab. Canadc. Uctcrioris. Decedenti. Hoc. Munusculum. Alumni. Rcverentes. Grate. Amantes. Dedicavernnt. A.D. xvi. Kal. Maias. MDCOCLXII."-which may be reudered in English: "To the Rev. Dr. Scadding, on his retirement from Upper Canad. Collere, the pupils presented this gift, as a slight testimonial of their respect, and grateful affection. April 16 h , 1862." From Dr. Seadding's reply, we make the following extracts:"When I look back over my career, many solemn thoaghts arise ns to its practical fruits; and I discern more kecnly than ever, the accountab!ensss which rests on the public instructor who has to do with the as yet unsullied but most sensitive human soul. All I cau say is, that I hope my influence by precept and example has been for good. It has been my lot, indeed, to labour obscurely down in the substructions of the edifice, and I have committed doubtless mistakes from momentary errors of judgment, but I hope that, on the whole, I have not failed to make some serviceable contributions to the general result. In dealing with a great variety of minds, one may take for granted that his words of instruction have not in every case had the same amount of furce; that they lave been sometimes misunderstond; that in some instances they have been wholly wasted; that soon after they passed the lip they, in effect, died away like the echoes is the 'purple glens' of the poets' Elfiand; but in innumerable cases, nevertheless, they have not died away, but still, instinet with the life of trulh, roll on

[^1]And it is in this reflection that the public instructor who has realized his function and his done his best to discharge it, finds his exceeding great reward. There are many 'iast words' which it might be desirable to say on this occision; but your intelligence does not require that I should say much. You know aiready, I think, the priceless value of that plastic and impressible season of life which you are now passing through, given to every man just ouce, an hour of grace never to recur. You know already that you ought every day to ba aiming at the possession of other qualities than mere literary accomplishments; that to human knowledge you should be seeking to add, as the prayer daily offered in this Hall teaches you, anothir and a higher wisdom. I will only add, in parting, what will also be to some of you no novelty, bat what to others will perhaps seem one more-the last-of my enirmatical sayings. Amidst all your gettings and strivings and propitiations, establish in your breasts a little shrine to Aidôs. I cannot compress more into one word than I do when I say this. Nor can I couvey in any English word fuliy the idea of what Aidôs is. But you will discover for yourselves. A regard to this power or principle, or whatever you may ca!l it, sincarcly mantainel and rendered habitual, is that which, in all ages, has male youth lovely, and has thrown over manhood, especially a cultivated manhood, an indescribable charm."

The following is a copy of a resolution by the Senate of the University of Toronto on the 13th of March last:
"That the Senate $m$ st sincere'y regrets that physical infirmities should cause Dr. Scadding to resign the First Classical Mastership of Upper Canada College, which he has so long and so honorably filled. They cannot allow the present opportunity to pass without expressing their high sense of the thorough conscientiousness with which he has discharged the duties of that office, and the lofty Christian example which he has manifested in every relation of life, and which during the long service of nearly a quarter of a century has sued no mean lustre on the institution with which he has been so long connected."

Professor Wilson, on the part of the Senate, added a few words of the bigh esteem in which Dr. Seadding had been held, and expressed the hope, that though his official connexiou had ceased, he would still take an active part in the ins!itution.

The Principal, Mr. Cuckburn, expressed his great regret at losing the assistauce of Dr. Scad ling, and pointed to his career as an examp'e for the youth of the country to follow.

The procecdings were here terminated, and the company separated, the College boys leading the way and shouting with that peculiar vigor of our young days, all the lo Pceans iucident to the commencement of a vacation. however short.-Leader.
__ Unifersity of Victoria College.-It will be fresh in the memory of our youngest reader that before His Royal Highuess the Prinet :. ak his departure from the shores of this coutinent on the oceasion of his visit in 1860, he graciously signified his intention of giving to the several Universities in our Province a sum of money to be applied for the fostering of learning in such maner as the authorities of each sohald deem best. The sum total being equitably divided by the late Governor General at the close of the same year, the Uuiversity of Victoria Cullege was last year enabled to offer two prizes to the students who stood First and Second is Arts, the First Prize being given to that student who took the hi ghest standing in all the prescribed subjects of the curriculum during the four years of the undergraduate's cureer. It was afterwards decided that the Prizez should consist of a Gold Medal for the "First in Arts" and a Silver Medal for the "Second in Arts," but as this determination was not arrived at in time to have the Medais minufactured before the Convocation of 1861, the Prizemen of that year received a donation of books with the understanding that they should receive their medals, as the first of the Prince of Wates Prizemen, as soon as they were prepared. These medals have at last been received by the authorities of Victoria College in company with those designed fur the Prizemen of the present year, and as we have had the pleasure of examining them we will describe them to the best of our ability. The Guld Medal to be presented to Mr. Alexander Burns, (the First Prizeman last year) bears on the obverse an excellent likeness of Queen Victoria, with the usual tiara above her truly regal brow, and surrnunded with the inscription,-"Universitas Viclorice Collegium fundata, A.D. 1841." On the reverse appears the name of the Prizeman, surmounted with the crest of the Prince of Wales, and his motto - Ich Dicn. Below the name, if we remember rightly are the words "Primus in Artibus." A benutifully exccuted wreath of naple leaves surrounds the name and the inscription referied to, while surrounding the whole, is the following
inscription-"Prcemium a celcissimo Aiberto Edzo.ardo Principe Wallice Institutum A.D., 1861." The Silver Medal for Mr. Wm. M'Clive, the Second Prizeman for last year, is similar in design aud exccution. Both Medals reflect the highest credit on their manufacturer,-Mr. Frederick B. Smith, of New York, and the same may be said of the designer, whocrer he may be. We especially admire the chaste, classic elegance of the portrait of the Queen, which reminds us of the happiest efforts of the late Mr. Wyou. Having mentioned Mr. M'Clive's name, we may perhaps be allowed to announco that he has accepted the office of Tutor in the University in which he graduated last year with su much honor, while at the same time he pursues his studies for the Bar. He is a member of the Presbyterian Church, and as such is a living illustration of the great fact that the University of Victoria College, though she is denominational is not sectarian.-Cobourg Star.

University of MoGill College.-It will give much p!easuse to the friends of scientific education and of the McGill Uuiversity, to be informed that, at a late meeting of the Board of Governorz, T. Sterry Hunt Esq, Sc. D., M. A., F. R. S., de., was appointed to the chair of Applied Chemistry and Mineralogy, now created in the Faculty of Arts. White the ominent qualifications and high reputation of Dr. Hunt shed lustre on this oew chair, the University has conferred an important bencfit on the country, and especially on this city, in placing within the reach of young men entering on those professions in which a knowledge of practical chemistry is of importance, advantages which they have heretofore been obliged to seek abroad. There can be no doubt that in this great centre of manufactures and medical education, a large number of students will be found ready to avail themselves of the means of scientific training thus offered. It is proper to add that the University is enabled to extend its usefulness in this direction, chiefly through the liberality of two of its friends-William Molson. Esq., who has erected the Laboratory building; and another gentleman, who for the present withholds his name, who contributes the salary of the chair,-leaving merely the apparatus and incidental expenses to be provided for by the University. The present npprintment does not interfere with the Professorship of Chemistry in the Medical Faculty, eo long beld by Dr. Sutherland, Dr. Hunt's duties being limited to the students in Arts and to special students in Practical Chemistry; while the removal of Mincralogy from the Chair of Natural History will enable Dr. Dawson to devote himself more exclusively to other departments of that extensive subject, thus rendering the course of Natural Science in McGill University one of the mosl complete to be found anywhere. Dr. Hunt retains his connection with the Geolorical Survey of Cuuada; and in adding thereto the function of a public teacher, only conforms himself to the estaplished practice of the officers of the Geological Survey of great Britain.-DIontreal Gazctte.

## VIII. 7ngluaturental allotites.

## DISTRIBUTION OF THE JOURNAL OF EDUCATION.

In consequence of the number of Local Superintendents who, for various reasons, have declined personally to superintend the distribution of the Journal of Education in thicir respective townships, in the way suggested in the circular notice published in the lournal for February last, the plan then proposed has been abandoned. It is however suggested, that each Local Superintendent should make arrangements at the postoffices within the bounds of their respective fields of labour, for the prompt and regular delivery of the Journal. All copies not called for within a reasonable time, should be returned to the Educational Department.

## SCHOOL REGISTERS SUPPLIED THROUGH

LOCAL SUPERINTENDENTS.
School Registers are supplied gratuitously, from the Department, to Common and Separate School Trustecs in Cities, Towns, Villages and Townships by the County Clerk-through the local Superintendents. Application should therefore be made direct to the local Superintendents for them, and not to the Department. Those for Grammar Schools have also been sent to the County Clerk, and will be supplied direct to the head Masters, upon application to the Clerk.

## NORMAL SCHOOL.

The present Session of the Normal School will terminate on the 22nd of June. The next Session will commence on the 8th of August. Application for admission should be made not later than the first week of the Session.

## NOTICE TO CANDIDATES FOR GRAMMAR SCHOOL MASTERSHIPS.

The Committee of Examiners appointed by the Council of Public Instruction for Upper Canada, meets in the Normal School Buildings, Toronto, on the last Monday in June and the first Monday in January of each year. Candidates are required to send in their names to the Chairman of the Committee one week previous to the day of examination.

## PUBLIC LIBRARY BOOKS, SCHOOL MAPS, APPARAtus, AND PRIZE BOOKs.

The Chief Superintendent will add one hundred per cent. to any sum or sums, not less than five dollars, transmitted to the Department by Municipal and School Corporations, on behalf of Grammar and Common Schools; and forward Public Library Books, Prize Books, Maps, Apparatus, Charts, and Diagrams, to the value of the amount thus augmented, upon receiving a list of the articles required. In all cases it will be necessary for any person acting on behalf of the Municipal or Trustee Corporation, to enclose or present a written authority to do so, verified by the corporate seal of the Corporation. A selection of Maps, Apparatus, Library and Prize Books, \&c., to be sent, can always be made by the Department, when so desired.
form of application for public library books, maps, apfarates, school prize books, etc.

## [Insert Post Office address here.]

Sir,--The [Trustees, or Board of Trustees, if in Towns, \&-c.] of the ..... School being anxious to provide [Maps, Library Books, or Prize Books, \&c.] for the Public Schools in the [Section, Town, or Village, \&c.] hereby make application for the ........., \&c., enumerated in the accompanying list, in terms of the Departmental Notice relating to .......... for Public Schools. The ........ selected are bona fide for the .........; and the Corporation hereby Pledges itself not to give or dispose of them, nor permit them to be given or disposed of, to the teacher or to any private party, or for any private purpose whatsoever, but to apply them solely to the purposes above specified in the Schools of the .........., in terms of the Departmental Regulations granting one hundred per cent. on the present remittance. The parcel is to be sent to the Station of the ......... Railway, addressed to
In testimony whereof, the Corporation above-named, hereto affixes its corporate seal to this application, by the hand of ......*, this ...... day of ......, 186-.

Amount remitted, $\$ . .$.


## To the Chief Superinterdent of Education, Toronto.

Note.-Before the trustees can be supplied, it will be necessary for them to have filled up, signed and sealed with a proper corporate seal, as directed, a copy of the foregoing Form of Application. On its receipt at the Education Office, the one hundred per cent. will be added to the remittance, and the order, so far as the stock in the Depository will permit made up and despatched. Should the Trustees have no proper corporate seal, the Department will, on the receipt of $t$ wo dollars additional, have one engraved and sent with the articles ordered.
***If Library and Prize Books be ordered, in addition to Maps and Apparatus, it will be necessary to send not less than five dollars additional for each class of books, \&c., with the proper forms of application for each class.

Tr The one hundred per cent. will not be allowed on any

[^2]sum less that five dollars. Text books canot be furnished on the terms mentioned above: they must be paid for in all, at , the net catalogue prices.

## ASSORTED PRIZE BOOKS IN PACKAGES,

Selected by the Department, for Grammar or Common Schools, from the Catalogue, in assorted packages as follows:
Package No. 1. Books and Cards, 5cts. to 70cts each $\$ 10$
، No. 2. Ditto ditto 5cts. to $\$ 1 \cdot 00$ each....... $\$ 16$
( No. 3. Ditto ditto 5cts. to $\$ 1 \cdot 25$ each..... $\$ 20$

- No.4. Ditto ditto 10cts. to $\$ 1.50$ each...... $\$ 26$

، No. 5. Ditto ditto 10cts. to $\$ 1.75$ eoch...... $\$ 30$
" No. 6. Ditto ditto 10cts. to $\$ 2.00$ each...... $\$ 36$
" No. 7. Ditto ditto 15cts. to $\$ 2 \cdot 25$ each... .. $\$ 40$
" No. 8. Ditto ditto 15cts. to $\$ 2.50$ each...... $\$ 46$
' No. 9. Ditto ditto 15 cts. to $\$ 2.75$ each...... $\$ 50$
" No. 10. Ditto ditto 20cts. to $\$ 3 \cdot 00$ each...... $\$ 56$
" No. 11. Ditto ditto 20cts. to $\$ 3.25$ each...... $\$ 60$
" No. 12. Ditto ditto 20cts. to $\$ 3 \cdot 50$ each...... $\$ 66$
" No. 13. Ditto ditto 25cts. to $\$ 3.75$ each...... $\$ 70$
" No. 14. Ditto ditto 55cts. to $\$ 4.00$ each...... $\$ 76$
" No. 15. Ditto ditto 25cts. to $\$ 4 \cdot 25$ each...... $\$ 80$
" No. 16. Ditto ditto 30cts. to $\$ 4.50$ each...... $\$ 86$
"No. 17. Ditto ditto 30cts. to $\$ 4.75$ each...... $\$ 90$
" No. 18. Ditto ditto 30cts. to $\$ 5.00$ each...... $\$ 90$
" No. 19. Ditto ditto 35cts. to $\$ 5 \cdot 25$ each...... $\$ 100$
" No. 20. Ditto ditto 35cts. to $\$ 5.50$ each...... $\$ 120$
ST Special Prizes, in handsomely bound books, singly at from $\$ 1.05$ to $\$ 5.50$. In sets of from two to six volumes of Standard Literature, at from $\$ 3.00$ to $\$ 10.00$ per set.
***Trustees are requested to send in their usual orders for the coming holiday season at as early a date as pussible, so as to er.sure an early despatch of their parcels, and thus prevent disappointment.

## ETEOROLOGICAL INSTRUMENTS AND BOOKS FOR SALE at The educational depository, toronto. <br> I. BAROMETERS.

Standard Barometer, mahogany frame. ...................... . . . . $\$ 7200$
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Wheel Barometer, $\$ 850$ to.............................................. . . . 2000
Bourdon's Barometer . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2500
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## II THERMOMETERS.

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Minimum Thermometer, walnut frame...................................... 900
Minimum Thebmometer, 9 inches .............................................. 200
Hrgrometer, Wet aud Dry Bulb Thermometer, mahogany frame. 1800
8-in. Lancewood Thebmometer. . . . . . . . . . . . . . . . . . . . . ........ 0 . 38
8 -in. Boxwood Thermometer, double scales from 85 cents to.... 095

| $10-\mathrm{in}$ | do | do | do | do $\$ 100$ to $\ldots \ldots$ | 15 |
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| 15 | 15 | to | $\ldots$ | 130 |  |

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Schoffern and Lowe's Practical Meteorology....................................... $\quad 0 \quad 37$
Smithsonian Institution Map of the Stars near the North Pole for observations on the Aurora
Refnold's Coloured Diagram of the Barometer with explanation of construction,

[^3] line, which may be remitted in postage stamps, or otherwise.

All cummunications to be addressed to J. Groree Hodgins, LL.B.,
Education Office, Toronto.
LOVELL $A T D$ GIBBOX, PRISTBRE, XONGL BTBERT, TOROMTO,


[^0]:    - By G.T. Kingston, Esq., M.A., Director of the Magnetical Observatory of Tor onto, From the Canadian Journal for March, 1862.

[^1]:    "' From soul to soul,
    And grow forever and forover.

[^2]:    | *The Trustees of the Section; Chairman and Secretary of the Board of City |
    | :--- |

[^3]:    Advertisements inserted in the Journal of Education for 25 ceuts per

