

RAINFALL.

The following extract from a paper by Desmond Fitzgerald, Esq., M. Am. Soc. C. E., printed in the transactions of the Am. Soc. C. E., September, 1892, is a fitting introduction to this subject :

"There is hardly any phenomenon about which so many misstatements are commonly made as that of the rainfall. Either 'the cutting down of the forests is fast diminishing the annual precipitation,' or else the latter is 'increasing rapidly from turning up of the ground,' and other causes. 'There are no longer such snow storms as we used to have.' 'The rains come now altogether in the spring.' 'Freshets and droughts come alike from great changes in the rainfall.' These and a multitude of other fallacies are constantly met with. As a matter of fact, the annual rainfall is such a varying quantity that it is extremely difficult to lay down general laws in regard to certain of its phases, even with the aid of a good rainfall table.

"Again, the observations themselves are frequently inaccurate, as can sometimes be told at a glance. The earlier results were generally too small, because the gauges were placed too high and less care was exercised to measure all the small showers and the snow. Too often the tables issued from official sources, and stamped with the approval of the Government, are open to this criticism. The periods also are generally too short to build safe theories upon and, lastly, self-interest connected with important commercial enterprises leads to false statements."

Rainfall observations have been taken at the Toronto Meteorological Observatory from 1843 to the present time, except from August, 1844, to March, 1845, inclusive. The recorded rainfall in 1843 is given as 50.175 inches, the heaviest on record. As the two following years are not available, and this is so high, it would be safer to eliminate it from the averages.

The observed rainfall at the Toronto Observatory has been as follows :

TABLE I.

Average of 8 years, 1846 to 1854 inclusive	34.16 inches.
" 10 " 1855 " 1864 "	34.88 "
" 10 " 1865 " 1874 "	33.66 "
" 10 " 1875 " 1884 "	31.53 "
" 10 " 1885 " 1894 "	31.92 "
" 54 " 1841 " 1894 "	34.61 "
" 23 " 1872 " 1894 "	32.77 "
" 5 " 1890 " 1894 "	33.60 "

The rainfall in the above tables includes the melting snow.

Rain observations have been taken at some few points north, east and west of the Humber water-shed, sufficient to demonstrate that the annual precipitation differs but little from that of Toronto, the amount at Toronto being slightly less than at points to the north and north-west.