

(2)

CASUAL PHENOMENA.

Note observations of the following:

THUNDER STORMS—Time of occurrence and direction of motion. TORNADOES—Time of occurrence, width and direction of path, effects produced, and whether attended by electricity or hail. LIGHTNING AT A DISTANCE—Time of occurrence, direction from observer, whether zigzag, forked, or diffuse. Objects struck by lightning, as trees, buildings, &c. HAIL STORMS—Time of occurrence, direction and width of path, size and quantity of stones, and amount of injury. AURORA BOREALIS—Time of appearance and disappearance; time of the formation of arch, beams, and coronas, and whether there is a dark cloud below the arch. Direction and time of occurrence of METEORS, SHOOTING STARS, SOLAR and LUNAR HALOS, PARHELIA, and PARASELENES. Time of early and late FROSTS, particularly first and last. DEPTH OF GROUND FROZEN, in feet and inches; disappearance of frost from the ground. Time of closing and opening of RIVERS, LAKES, CANALS, and STREAMS, and their extreme rise and fall. TEMPERATURE of wells and springs at least once each season. EARTHQUAKES—Time of occurrence, direction of impulse, number of shocks, and effects produced.

3 Sprinkle of Snow here. Mountains covered first time this fall

12 Rain gently all day, at 4 P.M. Snow fell scarcely covers the ground.

20 Light Sleet during night.

25

26 1 A.M. Thunder & Lightning. Hail fell for 5 minutes & then a heavy rain.

27 Warmest day in the month

28

30 Snow began to fall before day

31 " still falling at 4 P.M. Small granular particles