

at length grow to such a size as to rend asunder vast rocks, overturning crags and cliffs, by the power of their very minute and delicate roots." The parts of rocks loosened by these powers, are entirely separated, and are carried to a great or less distance, by streams of water, and in the higher regions, by the power of winds. In cliffs and precipices which have been formed by the splitting of masses of rock, effected in the manner above described, the loosened parts often lose their stability; and, following the direction of gravity, fall to the ground, an effect which has also been described by Seneca in another place. "Nor is it alone probable," says he, "that rocks are split asunder by their mere weight, but also when streams of water are carried over them, the continual moisture works into the joinings of the rock, and daily takes away a portion of the connecting matter, and, if I may so speak, abrades the skin by which it is contained. At length, in the course of ages, this gradual detrition so much diminishes the supporting parts, that they can no longer sustain the weight. Then masses of vast size fall down, and the rock tumbling from its ancient seat, overwhelms whatever lies below." The cohesion of some rocks, especially argillaceous ones, is so slight, and their porosity so great, that their smallest parts imbibe water, and are sensibly softened by it, an effect which is much assisted by the freezing of the water. This mechanical change is experienced by the different varieties of common clay, slate-clay, and some other rocks.

*Chemical* powers often act in conjunction with mechanical ones, in breaking down rocks, the former, the chemical, frequently finishing what had been begun by the