increase at the mean rate of one degree for every forty-five feet. At this rate, water would boil at the depth of a little more than a mile, and all rocks would be melted at the depth of sixty miles. Shall we, therefore, conclude that all the internal parts of the earth are actually in an incandescent, melted state? Many of the ablest geologists have not seen how they could escape this conclusion, especially when they see how it explains the spheroidal figure of the earth; also the phenomena of active and extinct volcanoes; the protrusion of the unstratified rocks; the numerous elevations of mountains and continents that have taken place, and the fact that a tropical climate once prevailed in the northern regions of the globe, even to the arctic circle. Besides, it has been proved by the profound mathematical researches of Baron Fourier, that even though all the internal parts of the earth, below the depth of eighteen or twenty miles, are five hundred times hotter than boiling water, — that is, in a melted state, — it would not increase the temperature at the surface more than one degree in two hundred thousand years. So that even if such be the case, it cannot sensibly affect the climate. Although, therefore, it would be presumptive to say that this doctrine of internal heat is as well established as the Newtonian doctrine of gravitation, yet every candid mind will acknowledge that it bears the strongest marks of probability, and that it lacks but little of being placed among the settled principles of science. And yet what an immense and startling conclusion!

Still more certainly demonstrated is another related conclusion, viz., that the whole globe in early times was in a melted state, and has been slowly cooling ever since. It is certain that its internal parts are now at a higher temperature than the surface, and that the planetary space around the