parts of the world. Some of those of New Zealand present close-resemblances to the Mammoth Hot Springs of Gardiner's river. Geysers occur also, in New Zealand; but the most celebrated is the Great Geyser of Iceland. To impart a conception of its behavior in eruption, the following description by S. Baring Gould is cited:—"Five strokes under ground were the signal, then an overflow, wetting every side of the mound. Presently a dome of water rose in the centre of the basin and fell again, immediately to be followed by a fresh bell, which sprang into the air full forty feet high, accompanied by a roaring burst of steam. Instantly, the fountain began to play with the utmost violence; a column rushed up to the height of ninety or one hundred feet, against the gray night sky, with mighty volume of white steam cloud rolling about it, and swept off by the breeze to fall in torrents of hot rain. Jets and lines of water tore their way through the cloud, or leaped high above its domed mass. The earth trembled and throbbed during the explosion, then the column sank, started up again, dropped once more, and seemed to be sucked back into the earth."—*Pen and Pencil Sketches of Faroë and Iceland.*

No one can contemplate the phenomena of a geyser or hot spring without feeling a conviction that heat is the essential condition. Somewhere within the earth is a repository of heat sufficient to warm, or even to boil, the water which rises to the surface. Strata whose outcropping edges appear at the surface, receive rain-water and convey it along the dip to unknown depths. In the geyser, some concurrent conditions must exist. It is admitted that the water rises through a tube, and that in its lower part a temperature exists sufficient to boil water under the pressure there existing. But details of the mechanism are not unanimously agreed upon. They are probably somewhat as follows:—Water accumulates in the geyser pipe upon the steam formed in the lower part by the bottom temperature. The steam, for a time, is subjected to compression, and the compression increases with the continued development of steam and accumulation of water. Finally