http://www.geology.19thcenturyscience.org/books/1905-Geikie-FoundersGeol/README.htm

and observation furnished further powerful support to some of the disputed doctrines in the theory of his old friend Hutton.[1]

There was another and still more important direction in which it seemed to this original investigator that the Huttonian doctrines might be subjected to the test of experiment. It was an important feature in these doctrines that the effects of heat upon rocks must differ very much according to the pressure under which the heat is applied. Hall argued, like Hutton, that within the earth's crust the influence of great compression must retard the fusion of mineral substances, and retain within them ingredients which, at the ordinary atmospheric pressure above ground, are rapidly volatilized. He thus accounted for the retention of carbonic acid by calcareous rocks, even at such high temperatures as might melt them. Here then was a wide but definite field for experiment, and Hall entered it with the joy of a first pioneer. As soon as he had done with his whinstone fusions, he set to work to construct a set of apparatus that would enable him to subject minerals and rocks to the highest obtainable temperatures in hermetically closed tubes. For six or seven years, he continued his researches, conducting more than 500 ingeniously devised experiments. He enclosed carbonate of lime in firmly secured gun-barrels, in porcelain tubes, in tubes bored through solid iron, and thereafter exposed it to the highest temperatures which he could obtain.

[1] "Experiments on Whinstone and Lava," read before the Royal Society of Edinburgh 5th March and 18th June 1798, *Trans. Roy. Soc. Edin.* vol. v. p. 43.