highly heated portions. If the solid and the molten portions suffered equal losses of heat, the molten, by shrinking the most, became too small for the enveloping crust. The crust, therefore, must wrinkle, to fit the shrinking nucleus. Thus incipient inequalities of the surface began to appear. These were the germs of mountains and of continents. From a new-born wrinkle grew the lofty Cordillera.

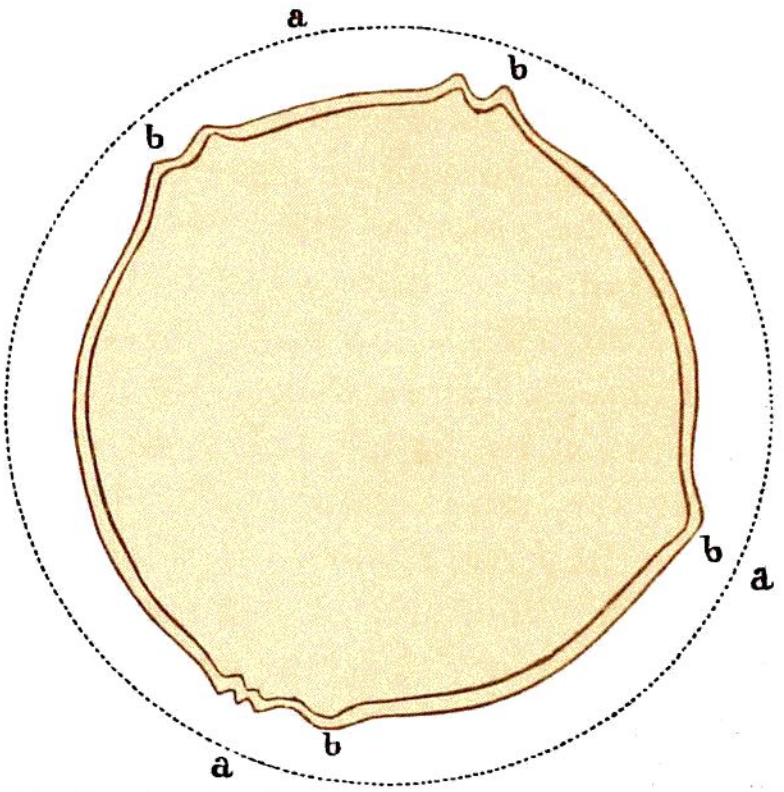

Fig. 13. Ideal Section of the Earth in primeval times.
a, *a*. The surface when solidification first commenced.
b, *b*. Wrinkles developed in the crust by the shrinkage of the nucleus.

A scene of terrific sublimity approaches. As yet no water existed upon the earth. No rain had fallen upon the parched and blackened crust. All the water which now fills the oceans, and the rivers, and the lakes—all which saturates the atmosphere, and the soil, and the rocks—rested then upon the earth as an arid, elastic, invisible vapor, extending an unknown distance into surrounding space. This vapor was not cloudlike, but intensely hot and transparent. It was a gas, like the steam just issuing from the escape-pipe of a steam-boiler. The time had now arrived, however, when the remoter regions to which this aqueous gas extended began to be so far reduced in temperature as to cause condensation to begin—as the heated steam, rushing from the locomotive, soon