

tions of the solid strata. The intimate connection between earthquakes and volcanic agency, is too obvious to require much illustration. All volcanic eruptions are preceded by earthquakes, of greater or less extent; but all earthquakes are not attended by volcanic eruptions. The elastic vapour may sometimes find vent through existing fissures and apertures; or, the aqueous vapour may meet with subterranean currents of cold water, and suddenly collapse, producing a second earthquake in a contrary direction. In common language, the agitation of the ground, when the surface is not broken, is called the shock of an earthquake. Since the records of history, there have been no earthquakes in Great Britain equal in intensity to what have taken place in the southern parts of Europe. In the year 1247, a general earthquake is said to have extended over England; it threw down the church of St. Michael's, on the Hill at Glastonbury. The greatest earthquake recorded in England, took place November 14, 1318. On April the 6th, 1580, an earthquake, felt in London and Westminster, threw down a part of St. Paul's church, and of the Temple church. Perhaps, in the present time, ten years seldom elapse without the shock of an earthquake being felt in some part of Great Britain; but these are too feeble to require historic notice. We have evidence, however, of mighty earthquakes having shaken the surface of this part of the globe. The faults and dislocations of the strata, of which some account has been given in different parts of the present volume, must have been accompanied, during their formation, with more violent agitation of the ground than any recorded in history; but it is probable that, at that period, the land which now forms Great Britain had, only partially, emerged from the ocean.

Soon after the discovery of the Leyden Phial, many natural phenomena were ascribed to electric action, and earthquakes were supposed to be the result of electric shocks, acting with great intensity in the interior of the earth. The electric theory of earthquakes was soon discarded as untenable; but now, when the identity of magnetic and electric agency seems in many respects, to be established, it may deserve consideration, whether an interruption to the magnetic or electric currents, which circulate through the earth, may not, sometimes, occasion earthquakes, acting almost instantaneously over large portions of the globe.

If, as some philosophers maintain, there is a central fire under every part of the globe, or if certain spaces only are filled with ignited matter, we can scarcely doubt that chemical changes are taking place, which will also change the electrical relations between mineral beds. A series of strata may act like the plates of an immense voltaic battery, and discharge the electricity from one internal part of the globe to another, exciting vibrations that may agitate a whole hemisphere. I was informed by a gentleman who resided, several years, near the feet of the Himmahlaya mountains, that peals