

America best exhibits typical continental growth, because it stands by itself between the two oceans, free from other lands on the east, south, and west. In this it is greatly in contrast with Europe and Asia. In all its structure it shows that its orographic courses were outlined at its inception, and that its features were gradually developed from age to age, in accordance with the foreshadowed system. The Archæan protaxes have almost the lengths of the adjacent continental borders, and the systems of ranges of later elevation, on the Atlantic and Pacific sides, have parallel courses and like extent. They are not irregularly distributed groups or knots of mountains, but elevated lines in the continental structure, orderly placed according to principles and forces that were already at work in Archæan time.

Rock-making went forward under like comprehensive methods with the mountain-making. When Archæan time closed, North America comprised a *great Interior Continental or Mediterranean Sea*, partially separated by the protaxes from the continental-border seas on the Atlantic and Pacific; and, besides, there were, in some parts of the borders, parallel troughs or basins between Archæan confines. Through the following ages, these seas were doing their various work in rock-making, bringing first to a finish, and emergence with orographic aid, the eastern half of the continent; and then giving a like degree of progress and emergence to the western half; and, finally, under a comprehensive agency, carrying the whole area, from east to west, to completion.

5. *The earth an individual in development.* — The system of feature-lines, displayed in the islands of the Pacific, is virtually that of a hemisphere, for nearly half of the equator lies between the ocean's eastern and western limits. It may be rightly taken, therefore, as the system of the globe. All north-and-south lines are subordinate lines in this system. There is no network of pentagonal lines of dislocation (De Beaumont), or of tetrahedral lines (William L. Green, 1857-1887), or of dodecahedral lines, as urged by R. Owen, of Indiana, in his later paper on the earth's features (1888); for the existence of continental regions and oceanic basins implies local differences in the nature of the material over the sphere, when surface cooling began, that made such lines of symmetry impossible. Instead, the actual physiognomy includes long parallel ranges of lines, often bending in great curves, with transverse lines nearly at right angles, and a reference in all to the positions and forms of the continental and oceanic areas. The island chains of the Pacific, 1000 to 5000 miles long, are separated by underwater valleys, reaching in some cases to depths of 28,000 feet, or over 40,000 below the highest island summits. The system of feature-lines of the oceans is exhibited also by the continents, but with irregularities incident to the forms, positions, and consequent resistances of the nucleal land-masses.

System through regular progress is abundantly proved, but the special causes determining the details of the system are not yet all understood. The following are some of the points awaiting explanation: —