(1) The gathering of the dry land, the continents, the earth's individualities, and arenas of progress, mostly toward the north pole, and of the waters as largely toward the south pole, the great cause of continental differences in the system of progress.

(2) The attitude of the continents on the globe, each mass having the broader extremity to the north and narrowing southward — a fact which Bacon, in his *Novum Organum*, set forth as a problem for solution.

(3) The zigzag arrangement of the northern and southern continents, South America having its center 40° east of that of North America, and Australia, as far east of that of Asia.

(4) The separation of the northern and southern continents by a volcanic belt that girts the sphere.

(5) The two systems of courses in the grand feature-lines of the continents and oceans nearly at right angles with one another, the more equatorial and most prevalent varying between N. 60° W. and N. 70° W., but curving to N. 30° W., and the transverse system with correlate variations.

(6) The existence of a greater mean depth in the western half of the Atlantic and Pacific Oceans than in the eastern half, notwithstanding the fact that the continental border adjoining the west Pacific is a region of high mountains with many volcanoes in the continental islands, and that the border adjoining the west Atlantic has the lower mountains of North America and no volcanoes.

These characteristics of the earth necessarily date from the beginning of solidification; and the first — the existence of a larger part of the continental masses in the northern hemisphere and of the oceanic area in the southern — may have involved the others. For, if the alleged excess of density in the crust beneath the oceans is owing to the prevalence of basaltic rocks, the crust of the oceanic basin would have remained in fusion after that of the continental had generally cooled through an era long enough for a loss of 300° to 500° Fahrenheit, — a fact that would have determined differential conditions and consequences at the first cooling of the earth's crust.

The zigzag arrangement of the continents has been attributed to torsion; and the belt of volcanoes that girts the world has been pointed out as the belt of maximum torsion, and the courses of the earth's feature-lines as consequences in part of the pressure or tension attending torsion; and thus an explanation that reaches deeply into the subject of origins has already been presented.

W. L. Green (1875 and 1877), in *The Vestiges of a Molten Globe*, suggested the idea that the mass of the continental plateaus, occupying the northern hemisphere, caused, during the incipient stage of the first formed crust, a retardation in the rotation of this part of the floating crust, and thereby "a shearing strain . . . between the crusts of the northern and southern hemispheres," and hence a yielding to this strain along the earth's great volcanic belt; remarking that thus "South America became separated from its northern half continent, and pushed toward Africa," while Asia, in