mountain-systems have unilateral structure, and there has been in North America, Europe, and North Africa a general movement of rock-masses towards the north, in Asia towards the south.

Suess then enunciated certain principles of mountain-building. The simplest type of a mountain-system is that which begins with the occurrence of a rupture or fault rectangular to the direction of contraction, the severed crust-block then moving onward in the direction of the contraction (example, Erz mountains). The second and most frequent type is that which begins with the disposition of a principal fold striking transversely across the contraction and inclined in the direction of the contraction, a fissure then forming in the fold at the line of maximum tension. The front part of the fold moves in the direction of the contraction and pushes the sedimentary rocks before it into further foldings, the other part of the fold sinks, and volcanic rocks escape at the line of fragmentation and subsidence (example, Apennines and Carpathians). In a third type of mountain-building, several parallel folds arise, occupying a greater surface breadth, and usually ending on the inner side of the innermost fold with a steep crust-fracture (example, folded Jura mountains, Ardennes, Taunus, Appalachians). It depends on the intensity and direction of the folding-force, on the nature of the resistance, and on the greater or smaller brittleness of the varieties of rock, whether the secondary folds are preserved or if they are deformed and pass into faults whose planes are inclined inward to the mountains and serve as planes of overthrusting. In extensive regions the contracting force seems to have had the same direction during successive geological epochs.

Suess agreed with Shaler that the continents represent contractions of the whole earth's crust, whereas the mountain-systems are to be regarded merely as foldings of the more superficial layers of the crust. In addition to the folded mountainous portions of the earth's crust, Suess emphasised the presence of resisting crust-areas which, like Bohemia, are composed of old mountain-masses piled against or across one another like pack-ice, or like the vast Russian block consist of undisturbed horizontal strata. Such unyielding areas of the crust are frequently characterised by considerable gaps in the sedimentary series. Their geographical distribution decides the