resolved into tangential and radial tensions, which give effect to horizontal and vertical displacements. Under horizontal displacements Suess describes folds, anticlinal domes, overthrusts, and lateral shifts effected by dip-faults. The vertical displacements are evidenced by subsidence or inthrows, and they are accompanied by numerous fissures and faults, which may again be sub-divided into peripheral, radial, diagonal, and transversal faults. The nature of the subsidence in dislocated segments of the earth's crust determines the arrangement of the faults as limiting-lines of crust-basins, crust-troughs, flexures, or table-lands. The combination of a subsiding and tangential movement gives origin to specially complicated tectonical appearances, such as the development of fore-folds and back-folds.

Suess regards volcanoes only as slight and superficial indications of important phenomena in the nuclear mass of the earth. He describes a number of examples showing the gradual denudation and partial disturbance of volcanoes, and establishes a "series of denudation forms" intended to prove that there is no fundamental difference between the volcanic explosions and ejections of the present time, the massive flows of earlier periods, and the laccolites and deep intrusions of the oldest periods. The fissures and dykes of active and extinct volcanoes are carefully discussed, also the dislocations caused by earthquakes.

After these preliminary chapters, Suess makes a comparative investigation of the mountain-systems of the earth, and an attempt to discover their geological history from their tectonical structure. To the geologist the subject is opened out with unflagging interest. Beginning with the Northern Sub-Alpine area, Suess emphasises the obstructive influence which had been exerted by the mountain-ranges of Central Europe, the Sudeten mountains, and the Russian plateau. These resisting crust-blocks had for the most part successfully stemmed back the advancing Alpine folds, or in the case of the Sudeten and a part of the Russian plateau, the northward crust-creep had carried the Carpathian folds partially over the ancient mountain-masses.

Suess elucidates the direction of strike of the dominant folds in the Alpine system, and his description of the curvature and whirl-shaped arrangement of the leading lines of strike has thrown an entirely new light upon Alpine geology.