3. (c) The undisturbed chalk, which forms a sloping cliff, inland, or behind the beds (A) and (B), passes under the ancient sea beach, and appears as a terrace at the foot of the present cliffs.*

These appearances demonstrate the following sequence of changes in the relative level of the land and sea on the Sussex shores:—

First. The chalk terrace on which the ancient shingle rests, was on a level with the sea for a long period; and the beach was formed, like the modern beach, by the action of the waves on the then existing cliffs. The rolled condition of the materials, and the borings of the *lithodomi*, prove a change of level as decidedly as do the perforations in the columns of the temple of Serapis.

Secondly. The whole line of coast, with the shingle (B), was submerged to such a depth, as to admit the deposition of the strata (A) above them.

Lastly. The cliffs were raised to their present elevation, and at this period the formation of the existing sea beach commenced.

The elevation of the sea-shore with beds of marine shells, already alluded to as having been produced by earthquakes on the Chilian coast, has here then a parallel. A phenomenon of a like nature, but of a far more ancient period, is observable at Castle Hill, near Newhaven, about eight miles east of Brighton, where is seen immediately beneath the

* See Geology of the South-East of England, p. 30; and Fossils of the South Downs, p. 277.