

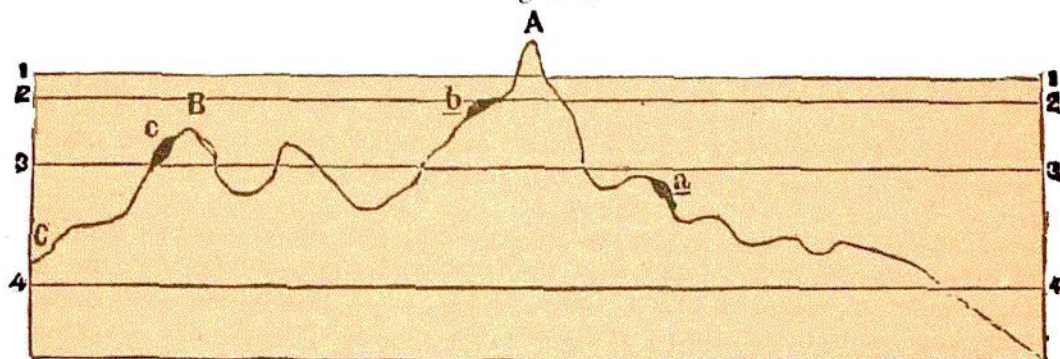
bank of shells. We should then expect to find stratified layers between them, because in so great a period of time materials must have accumulated there. Besides, how much simpler it is to suppose one system of rise and fall of the continent, than to suppose two such systems of oscillation, as the objectors must maintain.

5. The beaches and terraces lie upon the unmodified drift, even in many gorges where one would suppose a barrier might have existed. Hence all the lower forms of modified drift must have been formed in estuaries of the ocean, for no ridge existed to dam up the waters. No one doubts that a beach or terrace a few feet above the level of the ocean was originally formed by its waters. Now, from the lowest to the highest beach there is a continuous series, like a succession of steps. If the first is formed by the ocean, the second must be; likewise the third, and so on to the highest.

Let us look at this point in another light. As beaches are stratified, the materials must have been deposited from water. Now, when we find upon the side of a high mountain a stratified bank of sand and gravel, we know that some body of water must have existed there. But the land slopes from this bank to the ocean, therefore the water in which these materials accumulated must have been oceanic. There is no barrier which could have existed, high enough to have separated this body of water from the ocean. With such proof before us, we can not hesitate to believe that all those deposits called ancient sea beaches must once have formed the margin of the ocean, although there are no marine remains in them.

Fig. 114 represents beaches thus situated upon mountains. *a*, represents a beach on the east side of Mount Washington, (A), *b* one at Franconia Notch, the highest yet discovered in New England, *c* represents another beach in Hancock, Vermont, on the west side of the Green Mountains, (B),

Fig. 114.



Ideal Section of New England.

C shows the level of Lake Champlain. The line 1, 1, shows the level of the ocean when only the top of Mount Washington peered above the waters; 2, 2, represents the ocean level at the beginning of the Beach Period; and 3, 3, represents the same level at the beginning of the Terrace Period; 4, 4, represents its present level, in the Historic Period, and the base of the figure shows the level of the ocean in the Drift Period, according to the Glacial theory.

THE TERRACE PERIOD.

The country has now risen so much that the great valleys are seen in outline. Rivers of considerable size and length begin to carry into the estuaries a large amount of water worn materials, derived from the washing of the drift and the beaches, and form-