of organisms.[379] Where the original eminence rose above the sea, the projecting portion (Fig. 187) may be supposed to have been cut down to the lower limit of breaker action (*a a*), so as to offer a platform on which corals might build reefs (*i k*) up to the level of high water (*b b*). Or with less

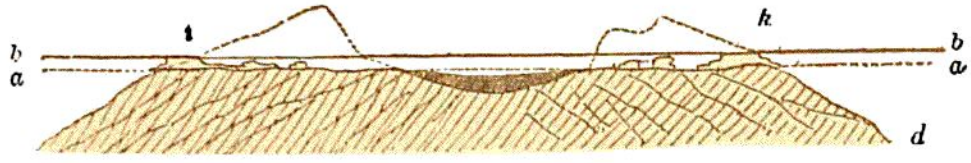

Fig. 187.—Section of a volcanic cone of loose ashes supposed to have been thrown up on the sea-floor and to have reached the sea-level (*B.*).

denudation, or a loftier cone, a nucleus of the original volcano might remain as an island (Fig. 188), from the sides of which a barrier reef might grow outward, on a talus of its own débris (*r r*), and maintain a steep outer slope. According to this view the breadth of a reef ought, in some degree, to be a measure of its antiquity.

To the obvious objection that this explanation requires

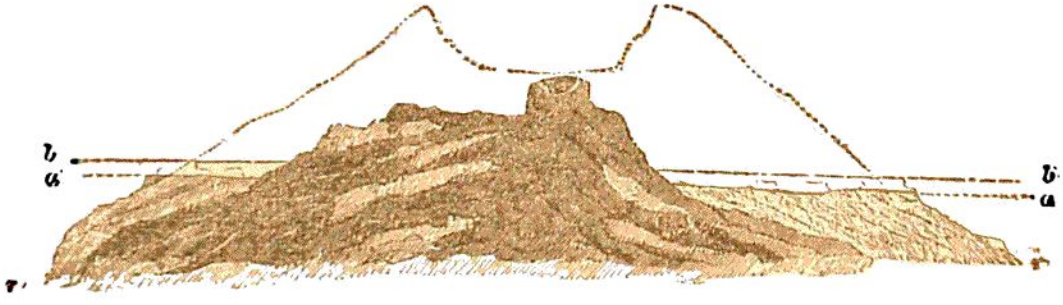

Fig. 188.—Section of denuded volcanic island with lava nucleus and surrounding coral-reef (*B.*).

the existence of so many volcanic peaks just at the proper depth for coral-growth, and that the number of true atolls is so great, Mr. Murray replies that in several ways the limit for the commencement of coral-growth may be reached. Volcanic islands may be reduced by the waves to mere

[379] "A submarine peak," says Prof. A. Agassiz, "is built up by the carcasses of the invertebrates that live upon it, and for which the pelagic fauna serves in part as food," Bull. Mus. Comp. Zool. Harvard, xvii. No. 3, 1889, p. 127.