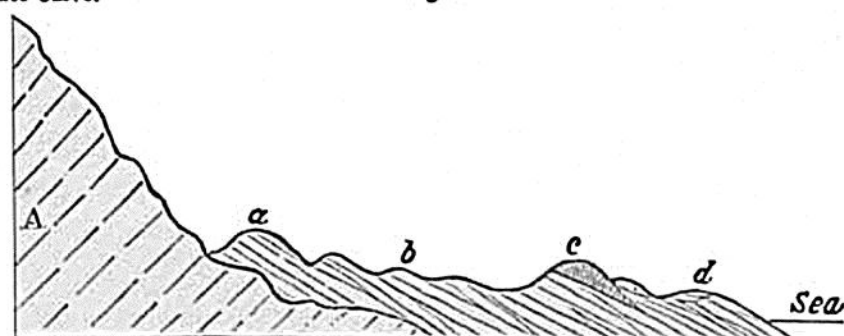


The description above given of the slanting position of the minor layers constituting a single stratum is in certain cases applicable on a much grander scale to masses several hundred feet thick, and many miles in extent. A fine example may be seen at the base of the Maritime Alps near Nice. The mountains here terminate abruptly in the sea, so that a depth of many hundred fathoms is often found within a stone's throw of the beach, and sometimes a depth of 3000 feet within half a mile. But at certain points, strata of sand, marl, or conglomerate, intervene between the shore and the mountains, as in the annexed fig. (7), where a vast succession of slanting beds of gravel and sand may be

Monte Calvo.

Fig. 7.



Section from Monte Calvo to the sea by the valley of Magnan, near Nico.

A. Dolomite and sandstone. (Green-sand formation?)

a, b, d. Beds of gravel and sand.

c. Fine marl and sand of St. Madeleine, with marine shells.

traced from the sea to Monte Calvo, a distance of no less than 9 miles in a straight line. The dip of these beds is remarkably uniform, being always southward or towards the Mediterranean, at an angle of about 25° . They are exposed to view in nearly vertical precipices, varying from 200 to 600 feet in height, which bound the valley through which the river Magnan flows. Although in a general view, the strata appear to be parallel and uniform, they are nevertheless found, when examined closely, to be wedge-shaped, and to thin out when followed for a few hundred feet or yards, so that we may suppose them to have been thrown down originally upon the side of a steep bank, where a river or alpine torrent discharged itself into a deep and tranquil sea, and formed a delta, which advanced gradually from the base of Monte Calvo to a distance of 9 miles from the original shore. If subsequently this part of the Alps and bed of the sea were raised 700 feet, the coast would acquire its present configuration, the delta would emerge, and a deep channel might then be cut through it by a river.

It is well known that the torrents and streams, which now descend from the alpine declivities to the shore, bring down annually, when the snow melts, vast quantities of shingle and sand, and then, as they subside, fine mud, while in summer they are nearly or entirely dry; so that it may be safely assumed, that deposits like those of the valley of the Magnan, consisting of coarse gravel alternating with fine sediment, are still in progress at many points, as, for instance, at the mouth of the Var. They must advance upon the Mediterranean in the form of great shoals terminating in a steep talus; such being the original mode of ac-