

only is this shingle-bed elevated above the present sea-level, but its contents are of such a nature as could not have been thrown up by the sea, in its present relation to the countries that form its shores.

3. A series of loosely aggregated calcareous deposits, obscurely stratified, rests upon this bed of shingle, and forms the upper portion of the cliff, varying in total thickness from fifty to one hundred and twenty feet. These strata are composed of chalk rubble and loam, with flints partially water-worn, and boulders, and pebbles of tertiary sandstone; the whole promiscuously intermingled, and deposited in nearly horizontal layers, from one to three or four feet thick. But the face of the cliff generally presents a weather-worn and crumbling aspect, and large masses are constantly falling down, in consequence of the removal of the ancient shingle, by the effects of the waves at the spring-tides. From the loose state of aggregation of these beds, the fallen masses are speedily washed away, but here and there blocks of great hardness, provincially termed *Coombe-rock*, remain upon the shore; and, but a few years since, there was a group of high rocks of this kind near the Chain-pier. This compact conglomerate has been produced simply by an infiltration of calcareous spar (see p. 52, and *Wond.* p. 65.), which has cemented together the fragments of chalk, flint, &c. In some places, this infiltration has reached the bed of ancient shingle below, and large blocks are occa-