The rapidity of the infilling is sometimes not a little remarkable. Since the year 1714, the Kander is said to have thrown into the Lake of Thun a delta measuring 230 acres, now partly woodland, partly meadow and marsh. The Aar, at its entrance into the Lake of Brienz, has deposited a delta 3500 to 4000 feet broad, formed of detritus which at the mouth of the river has an outward slope of 30°, that gradually falls to the nearly level lake floor. In twentyseven years after its rectification the Reuss had laid down in the Lake of Lucerne a delta estimated to contain upward of 141 million of cubic feet of sediment, which is equivalent to a discharge of 19,350 cubic feet in a day, or nearly 7,000,-000 cubic feet in a year.<sup>172</sup>

In the case of a large lake whose length is great in proportion to the volume of the tributary river, the whole of the detritus may be deposited, so that, at the outflow, the river becomes as clear as when its infant waters began their course from the springs, snows, and mists of the far mountains. Thus, the Rhone enters the Lake of Geneva turbid and impetuous, but escapes at Geneva as blue translucent water. Its sediment is laid down on the floor of the lake, and chiefly at the upper end, as an important delta which quite rivals that of a great river in the sea. Hence, lakes act as filters or sieves to intercept the sediment which is travelling in the rivers from the high grounds to the sea (p. 684).<sup>113</sup>

(e) Estuarine Deposits; Bars and Lagoon-barriers.—If we take a broad view of terrestrial degradation, we must admit that the deposit of any sediment on the land is only temporary; the inevitable destination of all detrital material is the floor of the sea. Where a gently flowing river comes within the influence of the alternate rise and fall of the tides, a new set of conditions is established in regard to the disposal of the sediment. During the flow of the tide in the Severn, for example, the suspended mud is carried up the estuary, and sometimes far up its tributaries. For

<sup>&</sup>lt;sup>172</sup> A. Heim, Jahrb. Schweizer Alpenklubs, 1879.

<sup>&</sup>lt;sup>173</sup> Consult a suggestive essay, G. K. Gilbert on the topographic features of lake-shores, 5th Ann. Rep. U. S. Geol. Surv. 1885, p. 75.