

of several million yards of drift, mostly sand, at relatively small cost. The protection of Romney Marsh affords a striking instance of success achieved by economical expedients, and of the abandonment of costly heroic measures which would have eventually led to disaster.

The system of low groynes, although in the majority of instances desirable, is not universally so. The art of building up a foreshore is to adjust the height of the groyne system to its accumulating volume of littoral drift. After depletion it is often prudent to remove planking from groynes in order to cause less obstruction to the run of the sea. Conversely, when rapid accumulation takes place, additional planking should be added to capture such travelling medium of defence.¹

On foreshores where extreme artificial conditions exist, high groynes are sometimes essential, and if such groynes were lowered erosion would at once commence. The sea front of Brighton is a case in point. The cliffs to the east of Brighton having by groynage been starved of their natural protection, have been severely eroded, the coast-line being set back in a deep indent, which involved a detour of the high road to Newhaven. The bank of shingle thus accumulated to the westward of Kemp Town is an artificial barrier, which would be quickly lost and the front of the town threatened if the groynes were lowered. By prolonging a system of groynes seawards, and thus creating a plateau of foreshore at a flat gradient, the most efficient defence is secured. Plate XIII (p. 140) shows a groyne constructed on a point of maximum erosion on the East Coast. The building of this groyne involved much difficulty, as during its construction the width of foreshore was only 26 feet at low tide, and seas of extreme violence were rapidly undermining and causing landslides in the glacial-deposit cliff in rear. By a system of low adjustable groynes the safety of the threatened section of sea frontage has been completely secured, the coast-line for about a mile being thus rendered safe at an expenditure of about £2000. At the present time the groyne shown in Plate XIII is high and dry at low tide, and a flatly shelving foreshore, with wide stretches of velvet sand,

¹ *Protection of Seashores from Erosion* (A. E. Carey). Greening & Co.