

of stones from the Bank, and these are in the following order of abundance:—

- (a) Chalk flints;
- (b) Greensand chert;
- (c) Portland limestone and chert;
- (d) Quartzites resembling those at Budleigh Salterton,
and other far-travelled rocks of doubtful source.

In rear of the Bank is the Fleet, a fiord running between it and the mainland, and varying from $\frac{1}{4}$ mile to 1 mile in width. In this fiord tidal influences are insignificant save at its opening. By forces set up under the Channel currents the line of the ancient raised beach already described has been forced shorewards, the Chesil Bank being a remnant of it, the west end of the beach having been driven up to the shore opposite Abbotsbury. Between Plymouth and the coast of Brittany the Channel is about 112 miles wide. Between Portland Bill and Cap de la Hague the width is suddenly reduced to 60 miles, widening to the eastward again to over 100 miles. The effect of this sudden contraction is the creation of the Race of Portland on the north side and the Race of Alderney on the south side of the Channel. Off Portland Bill the velocity of the race is 5 or 6 knots. Under the stress of its currents, combined with the blow of heavy gales, the old shingle beach has been steadily pushed back and the present contours of the coast-line created. The Bank runs from Abbotsbury eastwards for a distance of $10\frac{3}{4}$ miles, having a width at the base of 500 feet at the west end, increasing to 600 feet at the east end. At the west end the crest normally rises 23 feet above high-water level; at the east end to a height of 43 feet. The foundation of the Bank is Kimmeridge clay, at a depth of 8 fathoms of water. The section of this natural mole is highly instructive. At its east end, from the crest to a depth of $4\frac{1}{2}$ fathoms, it has a mean seaward slope of 1 in $5\frac{1}{2}$; for the next 2 fathoms this flattens to 1 in 8, and to the base in 8 fathoms to 1 in 30. At its west end to a depth of $3\frac{1}{2}$ fathoms the mean slope is 1 in 7; for the next 2 fathoms 1 in 11, and to the base in 6 fathoms 1 in 30. After the great storm of 1852 Sir John Coode took a series of sections, which showed that nearly 4,000,000 tons of shingle had been swept