

D.—PROGRESS OF OCEANOGRAPHICAL KNOWLEDGE, FROM THE VOYAGE OF
MAGELLAN TO THE VOYAGES OF COOK.

While Columbus and Gama had within a few years many imitators in the Atlantic and Indian Oceans, fifty-seven years elapsed before Drake accomplished the second circumnavigation of the globe. Drake was the first to see the extreme promontory of South America, later on called Cape Horn. "At length the vessel (of the Admiral) found itself near the extremity of the country extending towards the South Pole, which extreme cape, or most advanced point of all these islands (Tierra del Fuego), is situated near the 56th degree. Beyond this, towards the south, we found neither islands nor

¹ Krümmel, *Der Ozean*, p. 35; Pigafetta (*Premier voyage autour du Monde*, p. 52, Paris, l'an ix) says:—"For three months and twenty days we sailed about 4000 leagues on that sea which we called the *Pacific*, because during all the time of our navigation we did not experience a single storm, neither did we discover any land, with the exception of two desert islands, in which we found nothing but birds and trees, and for this reason we named them the Unfortunate Islands. *We were unable to find any bottom along their coasts*, and saw only a number of sharks. These islands are 200 leagues apart, the first in 15° south latitude, the second in 9°."

² Pigafetta says—"According to the reckoning we made with the chain astern, we ran each day fifty or sixty leagues" (*First Voyage Round the World*, Hakluyt Society, p. 65; Guillemard, *Life of Ferdinand Magellan*, London, 1890, p. 222). The oldest description of the log, or logge, dates from the time of Bourne, 1577 (see Breusing, *Zeitschr. f. Erdkunde*, Bd. iv. pp. 111 *et seq.*); Bourne wrote the "Rules of Navigation." In the *Encyclopædia Britannica* (art. Log) we read that the log line was used in navigation as early as 1570, and alluded to by Bourne in 1578.