

one of the founders of physical oceanography, used the surface temperatures recorded from different places in the sea in his examination of the currents. He organised an extended collection of temperature-observations for the benefit of navigation; he studied the winds and the drift of vessels, and in the middle of the nineteenth century he published his *Explanations and Sailing Directions to accompany the Wind and Current Charts*. He also wrote an extremely interesting book, *The Physical Geography of the Sea and its Meteorology*, which has appeared in many editions and in several translations. Maury's work had important consequences, for ship-masters following his directions shortened the voyage between North

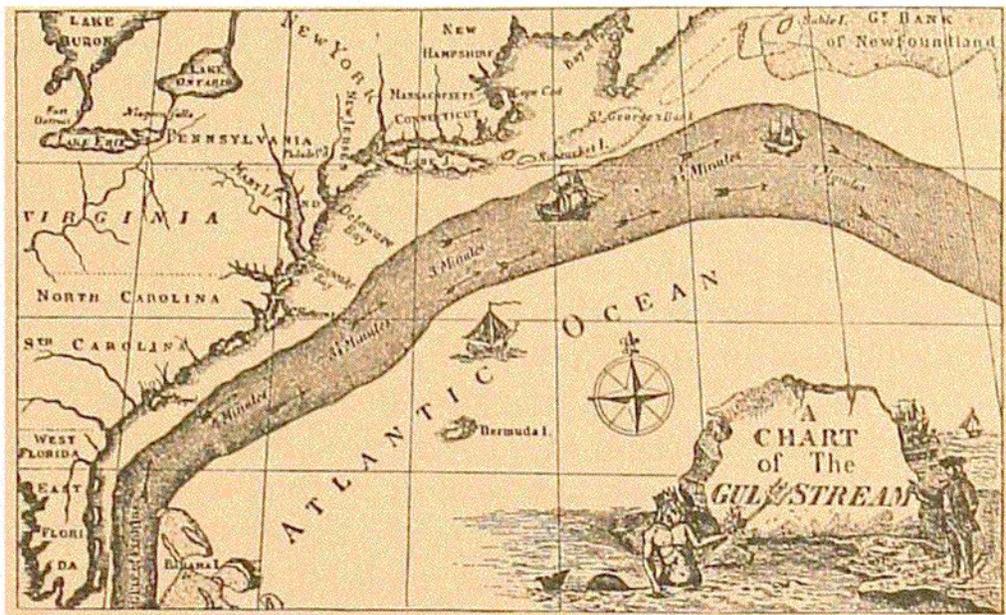


FIG. 153.—BENJAMIN FRANKLIN'S FIRST CHART OF THE GULF STREAM.

America and England by ten days, that from New York to California by about forty-five days, and that from England to Australia and back by more than sixty days. The profit derived from the use of Maury's charts by British ship-owners on the East India route alone amounted to 10 million dollars yearly.

Log-books
for recording
observations
at sea.

On Maury's suggestion it was decided, at an international congress at Brussels in 1853, that numbers of log-books should be sent out with captains of ships for the purpose of entering observations of wind and weather, of currents, and of temperatures at the sea-surface. This plan has been followed ever since, the notes being as a rule entered once every watch, so that a formidable pile of material has now been amassed. Up to 1904 the Meteorological Office in London had collected 7 millions of these notes, the *Deutsche Seewarte* in Hamburg