

back eastward by the polar current from Cape Horn. It is in this wise the warm waters of the Bay of Bengal, impelled by the Indian polar current, circulate between Africa and New Holland, whose southern coast, we may add, is washed by a lateral branch of this last-named current.

The *Monsoons* prevailing in the Indian Ocean serve to complicate still further the already intertangled and involved economy of the currents, by creating certain *periodical* currents, to which we must now direct the reader's attention.

In the preceding chapter, when dwelling upon the excessive salinity of the Mediterranean, we have spoken of a submarine current, whose function it is to convey the waters of the great inland sea into the "vexed Atlantic." Its existence may, to a certain extent, be proved by a calculation which shows that the quantity of salt water furnished by the *upper* current of the Strait of Gibraltar equals 170,000 cubic yards per annum—the quantity of fresh water contributed by the rivers, 16,000—and that which is lost by evaporation, 32,000 ; so that we should have an annual excess of 120,000, if the equilibrium were not re-established by a submarine outflow. This hypothesis is apparently confirmed by a very curious fact.

Towards the close of the seventeenth century, a Dutch brig, pursued and attacked between Tangier and Tarifa by the French corsair *Phoenix*, was sunk by a single broadside. But instead of settling down on the spot, the brig, owing to its cargo of oil and alcohol, floated in mid-water, drifted towards the west, and, after two or three days, eventually went ashore in the neighbourhood of Tangier, about twelve miles from the point where it had disappeared under the surface. It had, then, traversed this distance by the agency and under the influence of an *under* current, because the course taken was in direct opposition to that of the *upper* or surface-current.

This historical fact, in addition to some recent experiments, may be accepted as confirming the modern theory of a current flowing westward through the Strait of Gibraltar.