

misapprehension of the effects of the tides, and made no allowance for any movement of the terrestrial crust.

3. The same limited acquaintance with the facts which were needed for the solution of his difficulties is not less conspicuous in the way in which he dealt with his third problem. He thinks that in spite of the tidal oscillations which seem to retard the deposit of sediment over the sea-floor, the basin of the ocean might eventually be filled up, or that at least the sea would rise above its present mean level, if some unceasingly active cause did not counteract this tendency. Looking around at the margin of the land in different quarters of the globe, he sees what seems to him evidence that the waters of the ocean are subject to a continual impulse which drives them from east to west, due, he believed, to the influence chiefly of the moon, but partly also of the sun. He does not show, however, in what form this impulse is imparted otherwise than in the tidal wave. The eastern coasts of the continents appear in his eyes to be wasted by the attacks of the sea, while the western shores, being sheltered from these attacks, receive deposits of sediment. He looks on the Gulf of Mexico as a vast hollow, dug out of the land by the westerly advance of the Atlantic. The eastern side of Asia, with its chains of islands and the passage opened for the marine currents between these islands and Australia, appeals to his mind as a striking example of the truth of his generalisation, while the eastern side of America is hardly less confirmatory, although the sea has not yet cut through the Isthmus of Panama.