ciently proved that the low temperature is due to a branch of the Labrador current creeping down along the coast in a direction opposite to that of the Gulf-stream. In the Strait of Florida this cold stream divides—one portion of it passing under the hot Gulf-stream water into the Gulf of Mexico, while the remainder courses round the western end of Cuba. 240 miles from the shore the whole mass of water takes a sudden rise of about 10° C. within 25 miles, a rise affecting nearly equally the water at all depths, and thus producing the singular phenomenon of two masses of water in contact—one passing slowly southwards, and the other more rapidly northwards, at widely different temperatures at the same levels. This abutting of the side of the cold current against that of the Gulf-stream is so abrupt that it has been aptly called by Lieutenant George M. Bache the 'Cold wall.' Passing the cold wall we reach the Gulf-stream, presenting all its special characters of colour and transparency and of temperature. In the section which we have chosen as an example, upwards of three hundred miles in length, the surface temperature is about 26°·5 C., but the heat is not uniform across the stream, for we find that throughout its entire length, as far south as the Cape Canaveral section, the stream is broken up into longitudinal alternating bands of warmer and cooler water. Off Sandy Hook, beyond the cold wall, the stream rises to a maximum of 27°·8 C., and this warm band extends for about 60 miles. The temperature then falls to a minimum of 26°·5 C., which it retains for about 30 miles, when a second maximum of 27°·4 succeeds, which includes