

the intertropical region, and a little more, and which, though differing as to north and south, conspire in their general easterly character, the surface of the equatorial ocean is driven westward, and directed full against the two great barriers (the west coasts of America and Asia), and divided northward and southward into streams or currents which in their progress, after issuing from tropical latitudes, receive a direction, by reason of the rotation of the earth, corresponding to that of the anti-trade winds. These also, beginning about the same latitudes to descend to the sea level and strike on the ocean, aid their further progress, and carry them, or portions of them, far northward and southward into the Polar Seas, there to perform the work above assigned to them of melting the ice, and so keeping up the total amount of the ocean-water; besides mitigating, to a great extent, the severity of the cold on the coasts in high latitudes on which they strike; of which we have a familiar example in the warming influence of the celebrated Gulf-stream.

(21.) The steady and equalized agency by which the great system of the permanent winds and oceanic currents is kept up, which we have just described, contrasts itself strongly with the violent and, as it may almost in comparison be called, impulsive action of the sun on and around the point of the globe over which, for the moment, it happens to be vertical; and which corresponds to that portion of the solar energy which is directly employed in producing evaporation. The nature of this process we have now to explain.