

sphere, leaving, as it were, the atmosphere behind it; in which case there would be an apparent current or wind over the whole of the earth's surface, in a direction opposite to that of the earth's motion, that is from east to west; which wind, supposing the atmosphere did not move with the earth, would, of course, be at its maximum at the equator. Now both these causes are continually operating, and give origin to all the variety of the eastern currents upon the earth's surface; which, with the northern and southern currents, before described, conspire to produce the well known currents, called *the trade winds*. Before we attempt to explain the trade winds, their phenomena may be thus briefly described.

The trade winds in the Atlantic ocean, extend to about 28° on each side of the equator. At their extreme northern and southern boundaries, these winds generally blow from the east: but as they proceed towards the equator from the north and from the south, they gradually pass from the east, through all the intermediate points of the compass; till near the equator, they become in the northern hemisphere, due north; and in the southern hemisphere, due south. The trade winds are subject to some slight variations, chiefly arising from the position of the earth with respect to the sun. On these variations we do not think it necessary to en-