

at whatever part of the globe it happens to be vertical, and at which there is a supply of moisture, and for a very large space around it; what may be likened to a vast up-surgng fountain of air and vapour throwing itself up with an impetus; breaking up and bulging outwards the immediately incumbent aërial strata very far above their natural levels; and introducing at the same time into the air a great quantity of vapour, as well as withdrawing, *by direct transfer*, from the lower atmosphere, a great deal of air; which of course has to be supplied by in-draft along the surface of the earth.

(23.) The process now described, is in a great many of its features similar to that gentler one previously stated: and as it always takes place at some point or other of the intertropical region, it conspires with and locally exaggerates its result so far as the transfer and circulation of air and the production of winds is concerned. As regards the vapour, a large portion is very speedily deprived of its elasticity and ascensional power, and reduced to the state of visible cloud, collecting and descending in rain. This is a consequence partly of its arrival in a colder region, but mainly of the property which all gases and all vapours alike possess, of absorbing and rendering latent a large quantity of heat as they expand in volume, and so becoming, *ipso facto*, colder. Both the air and the vapour *do* so expand as they rise, by reason of the diminution of pressure they experience. The air indeed retains its elastic state *as air*, however cold it may become; and therefore merely