

its moisture within the limits of its point of saturation. Thus, at the Equator, before the air reaches the temperature of  $61^{\circ}$ , the presumed point of its saturation, it must ascend to the height of 6000 or 7000 feet. At this height, its vapour will be condensed, and a cloud will be formed; which may either be precipitated on the spot from which its constituent vapour had risen; or may be transported by the currents of the atmosphere, similarly to refresh a distant country; or may be again dissolved in the air: while under all these contingencies, the whole of the lower portion of the atmosphere is exempt from mist, and continues perfectly transparent. These operations are unceasing; moreover, the very clouds, by giving out their latent heat, and shielding the earth's surface from the direct influence of the sun, produce a still further effect; and have a constant tendency to modify their own formation and existence.

The general result of all the complicated and beautiful machinery connected with the properties of vapour, is, as before observed, that water is constantly ascending into the atmosphere, where it is again condensed in the form of rain, &c. over the whole earth. We shall therefore examine a little more in detail, the relations of the two great processes of evaporation and condensation, by which these important arrangements are accomplished.