where, at the level of the sea, the mean temperature is at least 80°; the temperature of an atmosphere of perfectly dry air would sink to the freezing point at a height of 15,000 feet: while the temperature of an atmosphere of vapour would, at the same height, sink only to 70°. At all the parallels of lower mean temperature, onward to the lowest round the Poles, at any height above the level of the sea, similar differences would exist between the temperature of an atmosphere of perfectly dry air, and the temperature of an atmosphere of vapour; these differences, of course, varying with the mean surface temperature. At the same time, throughout the whole range, from the Equator to the Poles, the specific gravity of the vapour at the level of the sea, would always exceed its specific gravity at any height above. Hence, in an atmosphere of vapour, there would be no tendency to vertical currents.

Having thus stated the leading properties of an atmosphere of air, and of an atmosphere of vapour, separately, we come to the proper subject of our inquiry; viz., *the condition of an atmosphere resulting from a mixture of air and vapour* —of such an atmosphere, indeed, as that in which we actually live.

The reader will have no difficulty in understanding the nature of a mixed atmosphere; provided he has clearly apprehended what has