former by boiling, at the ordinary pressure of one atmosphere. If, however, half this weight be removed the steam would occupy double the space. Therefore we say that steam is elastic. But it is not so to an unlimited extent; for if, instead of diminishing, we were to increase the pressure a large portion of the steam would be converted into water. That is to say, the tension of steam at 100°C. or its power to withstand pressure, is equal to one atmosphere (the weight of a column of air from the sea-level to the limit of the atmosphere, equivalent to the weight of a column of mercury of the same diameter 760 mm. high). Steam heated to a higher temperature (as can be done in the boilers of steam engines) can resist a greater force before being converted into water. It is, therefore, able to do some work in addition to resisting the atmosphere. If cooler than 100°C. its tension is less than that necessary to resist the atmosphere; and, therefore, being unable to entirely resist it, the steam must be mixed with the air (in proportion depending on the temperature) if it is to remain uncondensed. The cooler it is, the greater the proportion of air mixed with it must be; or, since the temperature of the steam and the air are the same, we may say the cooler the air the less aqueous vapour it is able to hold.

When air is completely saturated with vapour, it is said to be at its *dew point*. If subsequently cooled, a portion of the vapour will separate; if heated, it can absorb still more. This we find frequently illustrated in nature. A glass of cold water brought into a warm room frequently condenses a film of water on its surface. During cold weather dew is often deposited from the atmosphere of the warmer room on the windows. Clouds and fogs, which consist of minute drops of water too small to fall to the ground, are produced by a warm current of air laden with moisture coming in contact with a colder one, lowering its temperature below the dew point. That the clouds surrounding the peaks of mountains appear to remain there permanently, notwithstanding that a slight wind may be blowing, is due to the cold atmosphere produced by the ice, snow, or glaciers being confined to narrow limits. The warm air striking these produces a cloud which disappears when the warmer region is again reached; for the drops of water being once more evaporated become invisible like aqueous vapour always is.

The minute drops of water in the clouds, if gathered together into