

in temperature after it has once reached the boiling point, because the additional heat it acquires is employed in changing the water into steam, and becomes *latent heat* in the newly formed vapour. On the other hand, the latent heat of a liquid may be made *sensible*, by any method which we can adopt for solidifying it: for it may be remarked, (though with several exceptions,) that the more solid bodies have frequently less capacity for caloric than others which are less solid. If we mix sulphuric acid and water, we shall find, that sufficient heat is evolved to raise the thermometer considerably above the boiling point. The cause of this is, as we before saw, that through some disposition of chemical affinity, the particles of the acid and the water enter into composition in a much more *solid* form, the *capacity* for caloric is diminished, and that which was *latent heat* in its less condensed form, is now sensible, or free caloric, becoming sensible as it is evolved. Another example may be found in the slaking of quicklime. The heat which is here produced, arises from the water and the lime entering into a more solid form; and the *capacity* for caloric being lessened, the latent heat of the water is evolved, and becomes sensible. There is one more striking instance of the effect produced by the demand for caloric to be converted into latent heat; namely, in the cold produced by evaporation. This is very great in the evaporation of spirits of wine, ether, and other fluids which evaporate quickly. Here the caloric is absorbed by the spirits of wine, when converted into a state of vapour, to exist in the vapour in the shape of latent heat. In very hot climates, the cold produced is so intense, that a large animal may be actually killed by the frequent application of either to his body. In India, ice is pro-