

be supposed that there are rays of caloric flowing in all conceivable directions from all bodies. But when any body is below the temperature of those around it, the rays of caloric flowing from it are not equal in number to those which it has a capacity for receiving, and consequently its temperature is gradually heated to the same warmth with the objects around it. When bodies are once raised to the same temperature with the atmosphere around them, they radiate and absorb caloric in equal quantities, so that they preserve their equilibrium. Cold is merely a negative subject, implying the absence of heat. Thus, when we lay our hand upon a marble slab, the *feeling* of cold which we experience, is merely the caloric flowing from our hands into the marble, and endeavouring to raise the marble to the same temperature.

We have already observed that caloric is proceeding in different rays from all bodies. This is called the *radiation of caloric*. Different bodies have different radiating powers. This has been clearly proved by the experiments of Mr. Leslie. All heat which is perceptible to the senses may be considered as free caloric.

Besides the power of radiation, caloric may be reflected, subject to the same laws as those which govern optical reflection.—Another very important power of caloric is, its expanding all bodies, and thus acting in direct opposition to the attraction of cohesion. It affects this by introducing its particles between the particles of the body upon which it acts. The power of bodies to bear in this way the introduction of caloric between their particles, is called their conducting power. All bodies have more or less the power of conducting caloric, but some possess it in a much stronger degree than others,