

distance, that of their heat decreases in an inverted ratio of the square of the same distance.

Taking therefore the semi-diameter of the sun for a unit, and supposing the action of light to be as 1000 to the distance of a demi-diameter of the surface of this planet, it will not be more than as  $\frac{1000}{4}$  to the distance of two demi-diameters; as  $\frac{1000}{9}$  to that of three demi-diameters, as  $\frac{1000}{16}$  to the distance of four demi-diameters; and finally, when it arrives at us, who are distant from the sun thirty-six millions of leagues, that is about two hundred and twenty-four of its demi-diameters, the action of light will be no more than as  $\frac{1000}{50625}$ , that is, more than 50,000 times weaker than at its issuing from the sun; and the heat of each atom of light being also supposed 1000 at its issuing from the sun, will not be more than as  $\frac{1000}{16} \frac{1000}{81} \frac{1000}{256}$  to the successive of 1, 2, 3, demi-diameters, and, when arrived at us, as  $\frac{1000}{2562890625}$  that is, more than two thousand five hundred millions of times weaker than at issuing from the sun.

If even this diminution of the heat of light should not be admitted by reason of the squared square of the distance to the sun, it will still be evident that heat, in its propagation, diminishes more than light. If we excite a very strong heat, by kindling a large fire, we shall only