

which emits such an amazing brightness, I presume to be only an evaporation of the dense state that constantly plays on its surface ; and which we must regard as a true flame, more pure and dense than any proceeding from our combustible matters.

It is, therefore, by light that fire communicates, and heat alone cannot produce the same effect as when it becomes very strong to be luminous. Even water, that destructive element to fire, by which alone we can prevent its progress, nevertheless communicates when in a well-closed vessel, such as Papin's digester, where it is penetrated with a sufficient quantity of fire to render it luminous, and capable of melting lead and tin, whereas when it is only boiling, far from communicating fire, it extinguishes it immediately. It is true, that heat alone is sufficient to prepare and dispose combustible bodies for inflammation, by driving off the humid parts from bodies ; and what is very remarkable, this heat, which dilates all bodies, does not desist from hardening them by drying. I have an hundred times discovered, by examining the stones of my great furnaces, especially the calcareous, they increased in hardness in proportion to the time they had undergone the heat, and they also at the same time became specifically heavier. From this circumstance,