tory furnace, nor the most powerful bellows furnace could cause to run.

It is commonly supposed, that flame is the hottest part of fire, yet nothing is more erroneous than this opinion; the contrary may be demonstrated by the most simple and familiar experiments. Offer to a straw fire, or even to the flame of a lighted faggot, a cloth to dry or heat, and treble the time will be required to what would be necessary if presented to a brasier without flame. Newton very accurately defines flame to be a burning smoke, and this smoke, or vapour, has never the same quantity or intensity of heat as the combustible body from which it escapes. By being carried upwards and extending, it has the property of communicating fire, and carrying it further than the heat of the brasier, which alone might not be sufficient to communicate it when even very near.

The communication of fire merits a particular attention. I found, after repeated reflections that besides the assistance of facts which appear to have a relation to it, that experiments were necessary to understand the manner in which this operation of Nature is made. Let us recieve two or three thousand weight of iron in a mould at its issuing from the furnace; this metal in a short time loses its incandescence, **VOL. X.** K and