

minutions; for the globe of two inches heated for eight minutes, which weighed seven ounces, two drachms, and thirty grains, before it was put in the fire, lost only forty-one grains, which does not make a hundredth part of its weight; and that of three inches, which weighed twenty-four ounces, five drachms, and thirteen grains, having been heated by the fire for eighteen minutes, that is nearly as much as iron, lost only seventy-eight grains, which does not make the hundredth and eighty-first part of its weight. These losses are so trifling, that it may be looked upon, in general, as certain that pure clay loses nothing of its weight in the fire; for those trifling diminutions were certainly occasioned by the ferruginous parts which were found in the clay, and which were in part destroyed by the fire. It is also worthy of observation, that the duration of heat in different matters exposed to the same fire for an equal time, is always in the same proportion, whether the degree of heat be greater or smaller.

I have made similar experiments on globes of marble, stone, lead, and tin, by a heat only strong enough to melt tin, and I found, that iron refrigerated in eighteen minutes, so as to be able to hold it in the hand, marble refrigerated to the same degree in twelve minutes, stone in eleven, lead in nine, and tin in eight.

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