nearly as experiment can approach calculation.

So, likewise, the most constant difference to be found between each of the terms of cooling to actual temperature is found to be 54 minutes, for by supposing each term to increase 54, we shall have 39, 93, 147, 201, 255, 309, 363, 417, 471, 525 minutes, and the continuation of the real time of this cooling is found, by the preceding experiments, to be 39, 93, 145, 196, 248, 308, 356, 415, 466, 522 minutes, which approaches also nearest to the first.

I made the like experiments upon the same bullets twice or thrice, but found I could only rely on the first, because each time the bullets were heated they lost a considerable part of their weight, which was occasioned not only by the falling off of the parts of the surface reduced into scoria, but also by a kind of drying, or internal calcination, which diminishes the weight of the constituent parts, insomuch that it appears a strong fire renders the iron specifically lighter each time it is heated; and I have found, by subsequent experiments, that this diminution of weight varies much, according to the different quality of the iron. Experience has also confirmed me in the opinion, that the duration of heat, or the time taken VOL. X. Q