

hard ; that is, entirely deprived of a spring, since all are susceptible of receiving motion. I have endeavoured to shew how this sole force may change direction, and attraction become repulsion ; and from these grand principles, which are all founded on rational mechanics, I have sought to deduce the principal operations of Nature, such as the production of light, heat, and fire, and their action on different substances ; this last object which interests us the most is a vast field, but of which I can only cultivate a little spot, yet I presume I may render some assistance, by putting into more capable and laborious hands the instruments I made use of. These instruments were the three modes of making use of fire, that is, by its velocity, volume, and mass ; by applying it concurrently to the three classes of substances, which either lose, gain, or are not affected by the application of fire. The experiments which I had made on the refrigeration of bodies, on the real weight of fire, on the nature of flame, on the progress of heat, or its communication, its disperdition, its concentration, or its violent action without flame, &c. are also so many instruments which will spare much labour to those who choose to avail themselves of them, and will produce an ample harvest of knowledge .