

of directing it on all the objects which it has been specially framed to see,—among the rest, on other eyes, and the peculiarities of their structure? In both natural and physical science, on the contrary, have we not often found, that while the promise has been slight, the fulfilment has been ample far beyond the reach of anticipation? When the boy James Watt was playing, as Arago tells the story, with the steam of the family tea-kettle,—now marking how its expansive force raised the lid of the utensil, and now how, condensed into water, it trickled powerlessly adown the sides of the cold china cup, which he had inverted over it,—who could have imagined that in these simple processes there lay wrapped up the principle of by far the mightiest agent of civilization which man has yet seen,—an agent that, in a century after the experiment of the boy, would have succeeded in giving a new character to the arts both of peace and of war? Or who could have surmised, when, at nearly the same period, the Philadelphian printer was raising for the first time his silken kite in the fields, that there was an age coming in which, through a knowledge of laws hitherto unknown, but whose existence he was then determining, man would be enabled to bind on his thoughts to the winged lightning, and to send them, with an instantaneousness that would annihilate time and space, across land and sea? Nor in that geological branch of natural science to which, with the cognate branches, our Society has specially devoted itself, has performance in proportion to previous promise been less great. When it was first ascertained by the father of English geology, William Smith,—a man not yet more than twelve years dead,—that the Oolitic beds of England have always a uniform order of succession, and that this uniformity is attended by a certain equally uniform succession of groups of fossils, could it be once inferred that he was laying hold of a principle which, in the course of a