

of the valleys so numerous in Devon, Dorset, and Kent, and more or less found in all counties and in all districts, have the same beds on each side, and generally in such a direction that a line carried from one side to another would be in a right line with the direction of the stratification. "If a person were to see," says Mr. Calcott, "the broken walls of a palace or a castle that had been in part demolished, he would trace the lines in which the walls had been carried, and in thought fill up the breaches and re-unite the whole. In the same manner, when we view the naked ends and broken edges of strata on one side of a valley, and compare them with their corresponding ends on the other, we cannot but perceive that the intermediate space was once filled up, and the strata continued from mountain to mountain." Such effects, we think, can only be attributed to the action of moving floods of water, and these of the most impetuous character; and it may be remarked, that while they acted upon the surface of rocks, breaking down every impediment, they accumulated the components of the superficial gravel and transported boulders.

It will appear, then, if the statements and deductions advanced in the preceding pages be admitted, that the crust of the earth has been formed by a succession of causes, differing from each other in character as well as in intensity. The condition of the earth when it proceeded from the hand of the Creator, and was thrown into space to perform its ceaseless revolution round the orb of day, geology does not pretend to determine; nor does it assert that any of the rocks which now compose its crust formed, in their present condition, a part of the primordial mass. But there is abundant evidence to prove that the present arrangement of rocks is not that which they had at the beginning. The agents of destruction and recomposition are everywhere active, and from the very constitution of matter it may be deduced that their agency must have been influential from that instant when the particles of matter were united together; and, consequently, we may expect to find the effects of these causes on the surface of the earth itself. Observation proves that the expectation founded on the consideration of present causes is not fallacious, for the rocks which compose the crust of the earth bear evidence of the variety of causes which acted upon them. But this evidence is not confined