

and towards which, the long plains of Gault and Weald Clay directly lead. But this, except with certain rivulets, is so far from being the case, that some streams, like the Beult, rise close to the sea coast and flow westward. If, on the other hand, such a plain as pp once existed, it is easy to understand, how the rivers in old times flowed from a low central watershed to the north and south across the top of the Chalk, at elevations at least as high as, and probably even higher than the present summit-levels of the Downs.

Then, as by the action of running water, the general level of the *inner* country was being unequally reduced, so as to form tributary streams each cutting out its own valley, the greater rivers, augmented in volume by these tributaries, were all the while busy cutting and deepening those north and south channels through the Chalk Downs now known as the valleys of the Stour, the Medway, the Dart, the Mole, the Wey, which run athwart the North Downs, and the Arun, the Adur, the Ouse, and the Cuckmare, which, through gaps in the South Downs, flow south.¹ On any other supposition, it is not easy to understand how these channels were formed, unless they were produced by fractures or by marine denudation, of neither of which is there any proof. Through most of these gaps *no known faults run of any kind*, and the whole line of the Chalk is singularly destitute of fractures.

We get a strong hint of the probability of the truth of this hypothesis of the denudation of the Weald in

¹ This kind of argument was applied by Mr. Jukes to explain the *behaviour* of some of the rivers of Ireland, and he supposed that it might possibly apply to the Weald.—‘Geological Journal,’ 1862, vol. xviii. p. 378.