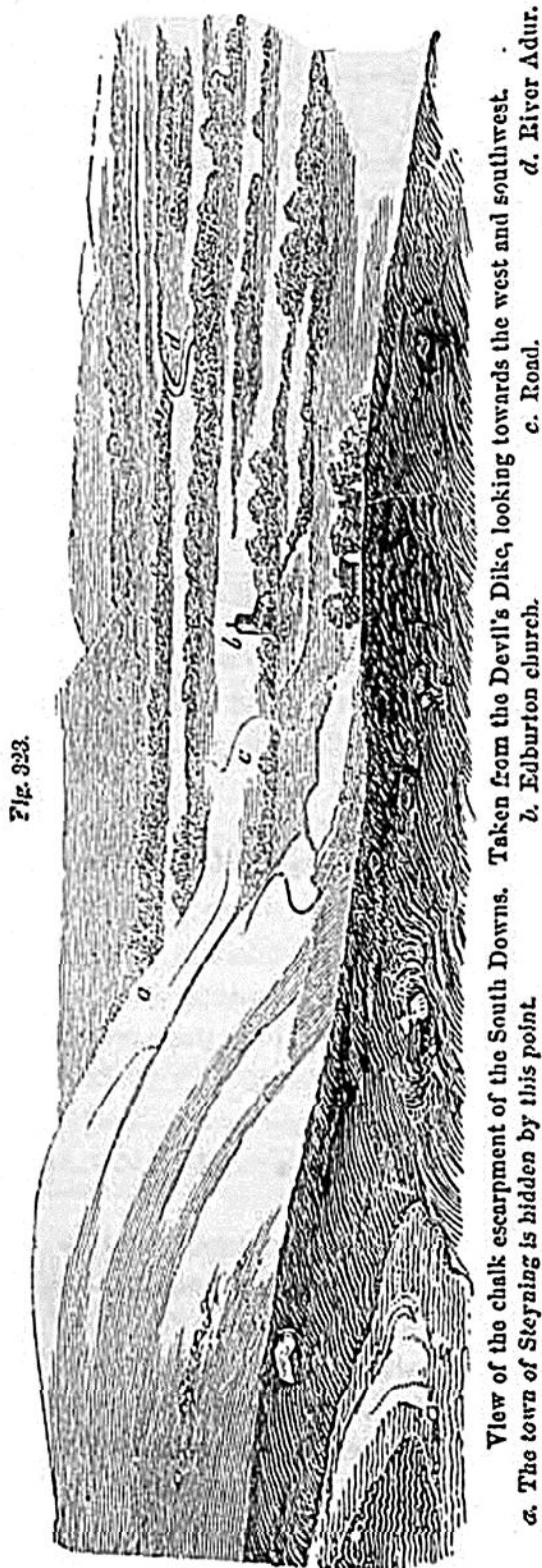


Mr. Martin has suggested that the great cross fractures of the chalk, which have become river channels, have a remarkable correspondence on each side of the valley of the Weald; in several instances the gorges in the North and South Downs appearing to be directly opposed to each other. Thus, for example, the defiles of the Wey in the North Downs, and of the Arun in the South, seemed to coincide in direction; and in like manner, the Ouse corresponds to the Darent, and the Cuckmere to the Medway.*

Although these coincidences may, perhaps, be accidental, it is by no means improbable, as hinted by the author above mentioned, that great amount of elevation towards the centre of the Weald district gave rise to transverse fissures. And as the longitudinal valleys were connected with that linear movement which caused the anticlinal lines running east and west, so the cross fissures might have been occasioned by the intensity of the upheaving force towards the centre of the line.

But before treating of the manner in which the upheaving movement may have acted, I shall endeavor to make the reader more intimately acquainted with the leading geographical features of the district, so far as they are of geological interest.

In whatever direction we travel from the tertiary strata of the basins of London and Hampshire towards the valley of the Weald, we first ascend a slope of white chalk, with flints, and then find ourselves on the summit of a declivity consisting, for the most part, of different members of the chalk formation; below which the upper green-



View of the chalk escarpment of the South Downs. Taken from the Devil's Dike, looking towards the west and southwest.
 a. The town of Steyning is hidden by this point.
 b. Edburton church.
 c. Road.
 d. River Adur.

* Geol. of Western Sussex, p. 61.