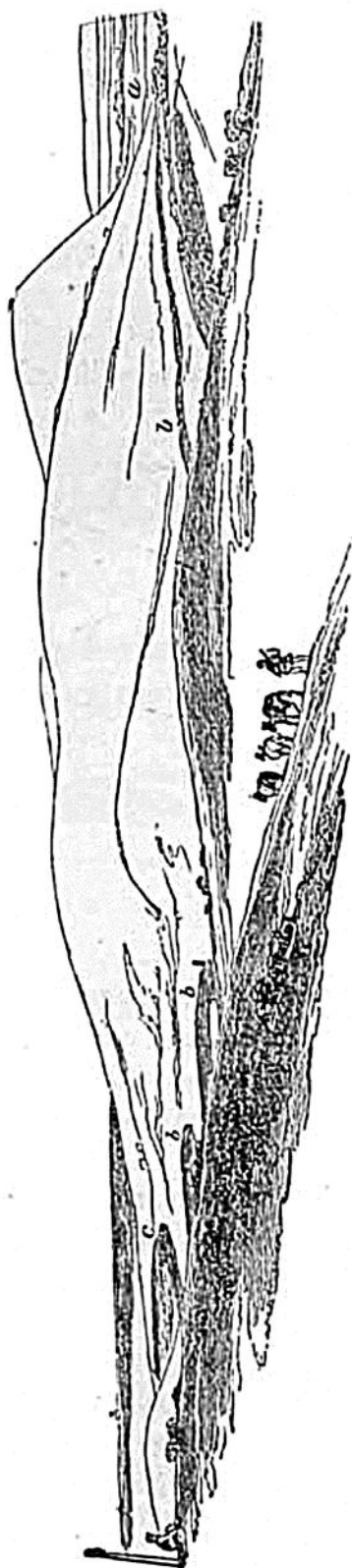


sketch (fig. 325) of the gorge of the River Adur, taken from the summit of the chalk-downs, at a point in the bridle-way leading from the towns of Bramber and Steyning to Shoreham. If the reader will refer again to the view given in a former woodcut (fig. 323, p. 274), he will there see the exact point where the gorge of which I am now speaking interrupts the chalk escarpment. A projecting hill, at the point *a*, hides the town of Steyning, near which the valley commences where the Adur passes directly to the sea at Old Shoreham. The river flows through a nearly level plain, as do most of the others which intersect the hills of Surrey, Kent, and Sussex; and it is evident that these openings could not have been produced by rivers, except under conditions of physical geography entirely different from those now prevailing. Indeed, many of the existing rivers, like the Ouse near Lewes, have filled up arms of the sea, instead of deepening the hollows which they traverse.

FIG 325.



Transverse Valley of the Adur in the South Downs.

b. River Adur.

a. Town of Steyning.

a. Old Shoreham.

That the place of some, if not of all, the gorges running north and south, has been originally determined by the fracture and displacement of the rocks, seems the more probable, when we reflect on the proofs obtained of a ravine running east and west, which branches off from the eastern side of the valley of the Ouse just mentioned, and which is undoubtedly due to dislocation. This ravine is called "the Coomb" (fig. 326), and is situated in the suburbs of the town of Lewes. It was first traced out by Dr. Mantell, in whose company I examined it. The steep declivities on each side are covered with green turf, as is the bottom, which is perfectly dry. No outward signs of disturbance are visible; and the connection of the hollow with subterranean movements would

be evident, if the rocks were not so perfectly level, and if the bottom were not so perfectly dry. The connection of the hollow with subterranean movements would