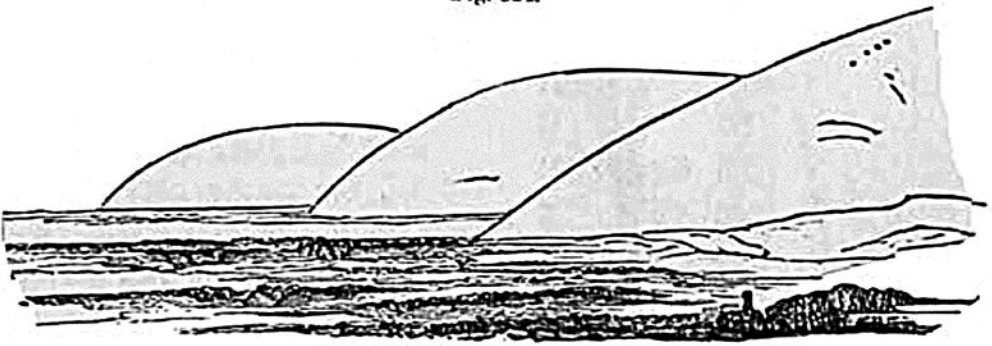


sand, and sometimes, also, the gault, crop out. This steep declivity, is the great escarpment of the chalk before mentioned, which overhangs a valley excavated chiefly out of the argillaceous or marly bed, termed Gault (No. 3). The escarpment is continuous along the southern termination of the North Downs, and may be traced from the sea, at Folkestone, westward to Guildford and the neighborhood of Petersfield, and from thence to the termination of the South Downs at Beachy Head. In this precipice or steep slope the strata are cut off abruptly, and it is evident that they must originally have extended farther. In the wood-cut (fig. 323; p. 274), part of the escarpment of the South Downs is faithfully represented, where the denudation at the base of the declivity has been somewhat more extensive than usual, in consequence of the upper and lower greensand being formed of very incoherent materials, the former, indeed, being extremely thin and almost wanting.

The geologist cannot fail to recognize in this view the exact likeness of a sea-cliff; and if he turns and looks in an opposite direction, or eastward, towards Beachy Head (see fig. 324), he will see the same line

Fig. 324.



Chalk escarpment, as seen from the hill above Steyning, Sussex. The castle and village of Bramber in the foreground.

of heights prolonged. Even those who are not accustomed to speculate on the former changes which the surface has undergone may fancy the broad and level plain to resemble the flat sands which were laid dry by the receding tide, and the different projecting masses of chalk to be the headlands of a coast which separated the different bays from each other.

Occasionally in the North Downs sand-pipes are intersected in the slope of the escarpment, and have been regarded by some geologists as more modern than the slope; in which case they might afford an argument against the theory of these slopes having originated as sea-cliffs or river-cliffs. But when we observe the great depth of many sand-pipes, those near Sevenoaks, for example, we perceive that the lower termination of such pipes must sometimes appear at the surface far from the summit of an escarpment, whenever portions of the chalk are cut away.

In regard to the transverse valleys before mentioned, as intersecting the chalk hills, some idea of them may be derived from the subjoined