val between two elevatory movements, the lower terrace will usually be destroyed, wherever it is composed of incoherent materials whereas the sea will not have time entirely to sweep away another part of the same terrace, or lower platform, which happens to be composed of rocks of a harder texture, and capable of offering a firmer resistance to the erosive action of water. As the yielding clay termed gault would be readily washed away, we find its outcrop marked everywhere by a valley which skirts the base of the chalk-hills, and which is usually bounded on the opposite side by the lower greensand; but as the upper beds of this last formation are most commonly loose and incoherent, they also have usually disappeared and increased the breadth of the valley. In those districts, however, where chert, limestone, and other solid materials enter largely into the composition of this formation (No. 4, map, p. 272), they give rise to a range of hills parallel to the chalk, which sometimes rival the escarpment of the chalk itself in height, or even surpass it, as in Leith Hill, near Dorking. This ridge often presents a steep escarpment towards the soft argillaceous deposit called the Weald clay (No. 5; see the dark tint in figure 321. p. 272), which usually forms a broad valley, separating the lower greensand from the Hastings sands or Forest Ridge; but where subordinate beds of sandstone of a firmer texture occur, the uniformity of the plain of No. 5 is broken by waving irregularities and hillocks.

Pluvial action. — In considering, however, the comparative destructibility of the harder and softer rocks, we must not underrate the power of rain. The chalk-downs, even on their summits, are usually covered with unrounded chalk-flints, such as might remain after masses of white chalk had been softened and removed by water. This superficial accumulation of the hard or siliceous materials of disintegrated strata may be due in no small degree to pluvial action for during extraordinary rains a rush of water charged with calcareous matter, of a milk-white color, may be seen to descend even gently sloping hills of chalk. If a layer no thicker than the tenth of an inch be removed once in a century, a considerable mass may in the course of indefinite ages melt away, leaving nothing save a stratum of flinty nodules to attest its former existence. A bed of fine clay sometimes covers the surface of slight depressions in the white chalk, which may represent the aluminous residue of the rock, after the pure carbonate of lime has been dissolved by rain-water, charged with excess of carbonic acid derived from decayed vegetable matter. The acidulous waters sometimes descend through "sand-pipes" and "swallow-holes" in the chalk, so that the surface may be undermined, and cavities may be formed or enlarged, even by that part of the drainage which is subterranean.\*

\* See above, p. 82, 83, "Sand-pipes in Chalk ;" and Prestwich, Geol. Quart, Journ. vol. x. p. 222.