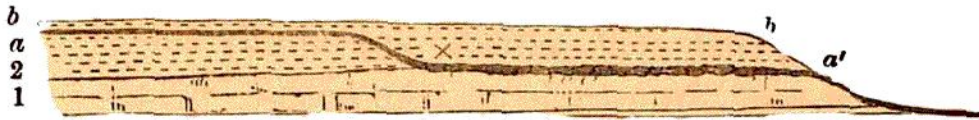


layers of flint, that once existed above the present surface. The following diagram will explain this:—

FIG. 114.



1, Chalk without flints. 2, Chalk with flints. *a a*, the present surface of the ground marked by a dark line. *b b*, an old surface of ground, marked by a light line. Between *a a* the surface is covered by accumulated flints, the thickness of which is greatest where the line is thickest between *a'* and *x*, above which surface a greater proportion of chalk has been dissolved and disappeared.

An irregular mixture of clay with flints, often several feet thick, is also frequent on the surface of the Chalk Downs on both sides of the valley of the Thames. The flints, though sometimes broken, are in other respects of the shape in which they were left by the dissolving away of the Chalk, and the clay itself is an insoluble residue, originally sparingly mingled with that limestone.

There is no doubt but that the plateaux of Carboniferous Limestone of the Mendip Hills, of Wales, of Derbyshire, and of the north of England, have suffered waste by solution, equal to that of the Chalk, only from the absence of flints in these strata we have no insoluble residue by which to estimate its amount. In Lancashire, north of Morecambe Bay, in Westmoreland, and in Yorkshire, east, north-east, and north-west of Settle, the high plateaux of limestone are often for miles half bare of vegetation. The surface of the rock is rough and rugged from the effects of rain-water and the carbonic acid it contains; looking, on a large scale, like surfaces of salt or sugar half dissolved. The joints of the rock have been widened by this chemical