

South of the great plain, and across Central Europe, stretches a series of plateaus formed of crystalline schists, granite, and other old rocks, comprising the central plateau of France, the Vosges Mountains, the Black Forest, the highlands north of these, through which the Rhine has cut its way, and the plateau of Bohemia.

South of these plateaus lies a series of ranges, which, in the main, stretch east and west across the continent, and include the Cantabrians, Pyrenees, Sierra Nevada in Spain, Apennines, Alps, Jura, Carpathians, Balkans, and Caucasus Mountains. These mountain ranges were all originally formed by the folding or wrinkling of the earth's crust, which was possibly due to the shrinkage of the interior of the earth as it cooled causing the comparatively hardened crust to thus accommodate itself to the changed condition within. Owing to the destructive action of water, wind, and ice, these ranges, though still the highest in Europe, have been much worn down, and are so altered that it rarely happens that the original upfolds of rock still form the ranges, and the original downfolds the valleys. The upfolds were most exposed to denudation, and the strata were weakened by the folding, as a piece of indiarubber bent upwards in the middle will show cracks on the outer curve. Hence the upfolds were rapidly worn down, till now we often find the present mountain summits composed of downfolding strata.

All the ranges mentioned above consist of a great many different rocks, which have been folded up one inside the other, and are now exposed at the surface on account of the erosion they have suffered. In the case of the Alps, the older crystalline rocks are exposed in the centre, while the more recent stratified rocks are found on each side in the east, and on the outer side in the west. The variety of rock structure has caused a great variety in the scenery of the Alps; but these mountains are everywhere characterized by the presence of many parallel ridges, separated by parallel lengthwise valleys. Alpineland occupies an area nearly equal to that of Great Britain, and has a sickle-like shape in the west, while broadening out in the east (see p. 73). Many of the summits in this area are always covered by snow, and much of the district is barren rock and uninhabitable.

The effect of the central plateaus and of the most northern of the folded ranges has been to form a great barrier to communication between the people inhabiting the Mediterranean shores and those in the northern plains; and this was especially the case in former days, when the moun-