districts are principally occupied by primitive chains, while the east and south-east exhibits little but calcareous mountains among which gypsum is plentifully interspersed. As we shall hereafter see that the limestone formation, answering in age to our magnesian limestone, swells into great importance on the continent, and constitutes large mountain zones encircling the Alps, &c., which are in like manner characterised by the intermixture of gypsum, it is no improbable conjecture that these deposits belong to the same period.

To return to the coast of France. Further west the red marle appears in great thickness, underlying the Jura chain near Lons le Saulnier, where it exhibits as usual salt-springs and gypsum.

At no great distance we find it encircling the Vosges, where vast masses of its conglomerates invest the primitive chains: and in like manner surrounding the opposite German chains of the Black forest and Bergstrasse, as may particularly be seen near Heidelberg: hence it spreads northwards as far as the transition slate district which stretches from the north-east of France across the Rhine, forming the chains of the forest of the Ardennes, the Rhingau, the Westerwald, &c. and skirting those on the south and east. Omalius d'Halloy, in his Geologie du Nord de la France, has described it in part of this line, where he remarks that, as in England, this is the oldest of the horizontal formations, the coal formations which rest on the opposite side of this slate district being highly inclined; and gives a description which strictly applies to our own red marle, &c. Although this tract is more naturally connected perhaps with those of similar formation in the north of Germany, yet as these may be traced in a line probably continuous through Poland to the very extremities of Russia, it is more convenient, before departing so widely from the central countries of Europe, to review in the first place the course of the new red sandstone through the south of Germany and the adjacent countries.

In this quarter we find these formations forming a zone on either side of the Alps; on the north interposed between the older rocks and great Nagelflue of Switzerland, which was once itself considered as belonging to them, but has been proved by subsequent researches to be of much more recent date, and contemporaneous with the sandstones of the basin of Paris. The new red sandstone is here intimately associated with alpine limestone, which corresponds with the calcareous formations already described as coeval with our magnesian limestone; and gypsum and salt may be found interspersed through the whole series. A similar character applies to the zone on the south side of the Alps; here the new red sandstone may