

surface, it would have been inferred, that brine springs so far below the level of the sea, had their source from the waters of the ocean, percolating through fissures in the earth.

There are many salt springs in France, but no mines of rock-salt. The salt springs at Salins, in the department of the Jura, rise in the red marl formation; and the gypsum with which they are associated is exactly similar to the massive gypsum in the English red marl. The strongest of these springs contains 15 per cent. of salt.

In Switzerland, the rock-salt and gypsum do not occur in the red marl, but between calcareous beds, which are, I believe, analogous to the English lias, and will be again mentioned.

In Spain, there are several salt springs and beds of rock-salt: the principal formation of rock-salt, at Cardona, in Catalonia, has been described by Count Alexander Laborde, in his magnificent work, entitled, *Voyages Pittoresques dans l'Espagne*.

"The salt district of Cardona comprehends the hill on which the town is situated, and the environs of more than a league in circumference. The surface is, almost every where, covered with vegetable soil to the depth of six inches or more, which renders it productive. The place where the rock-salt is procured, is a valley forming an oval, about one mile and a half in length, and half a mile in breadth from east to west, extending from the Castle of Cardona to the promontory of red salt at the other end. The last is the most considerable of the salt rocks, and has not yet been worked: it is six hundred and sixty three feet in height, and twelve hundred and twenty feet in breadth at its base. This valley is also traversed by a chain of hills of rock-salt: besides these, there are other rocks of salt at the feet of the fortress, and upon the declivity of the mountain which stretches to the fountain called Cancunillo. The mountain of red salt is so called because that colour predominates; but the colours vary with the altitude of the sun, and the greater or less quantity of rain. At the foot of this mountain a spring of water issues, which comes through a fissure on the summit. The rivulet runs all along the valley from the east, but passes under ground in part of its course, particularly under the hill where the rock-salt is mined: at a little distance, it rises again to the surface, and, after running along the plain, discharges itself into the river Cardona. This brook, in rainy seasons, swells the waters of the river, which then become salt, and destroy the fish; but at three leagues lower, the water has no perceptible taste of salt. All these salt mountains are intersected by crevices and chasms; and have also spacious grottoes, where are found stalactites of salt, shaped like bunches of grapes, and of various colours."—"Nothing can compare with the magnificence of the spectacle which the mountain of Cardona exhibits at sunrise. Besides the beautiful forms which it presents, it appears to rise above the river like a mountain of precious gems, displaying the various colours produced by the refraction of the solar rays through a prism."

Count Laborde.