

Oural, &c., and the great plains of France, Germany, and Russia.

In considering further the situations of mineral veins, we are struck by another feature of their geographical distribution. There are some general directions, common not to all, but yet to a very great majority of the veins of the British islands. More than half of the *productive* veins, pass in east and west lines, or rather a little N. of East, and S. of West, in the mining districts of Cumberland, Yorkshire, Derbyshire, North Wales, Shropshire, and Cornwall. The same directions prevail in Brittany, the Harz, Hungary, and, according to Mr. J. Taylor, in Mexico. Hence veins, running east and west, are commonly called "*right running*" veins, while others, which in the same districts are generally *unproductive*, and run very often north and south, across the productive veins, are often called "*cross*" veins. (For proofs of these truths, Werner on Veins, Williams's Mineral Kingdom, Forster and Sopwith's Accounts of Aldstone Moor, and Farey's Derbyshire; Mr. Carne, in the Geol. Trans. of Cornwall; Mr. J. Taylor on Veins, in the Brit. Assoc. Reports, may be consulted.) Now as the directions of the mountain masses to which these veins are geographically related are various; the greater number ranging N. E. and S. W.; some (Yorkshire, Derbyshire, Flintshire) north and south; others, Pyrenees, Harz, Carpathians, E. S. E.; it is requisite to take other circumstances into account, before deciding to what extent these prevalent directions of the mineral veins are dependent on the direction of the mountains which they enrich.

One of the most obvious and interesting points of inquiry is the dependence of the occurrence of metaliferous veins on the *age* of the rocks; and Werner, as might be expected from the tenor of his generalisations, ventured boldly to pronounce concerning many metals, the order of their antiquity in the crust of the earth. Judging from the rocks in which they frequently occur,