

thus circumstanced, would deposit the bases of the decomposed earthy and metallic salts on different parts of the rocky boundaries of the veins, according to the momentary electrical state and intensity of the points; in which conditions the *nature and position* of the rocks would be influential. When by such processes particular arrangements had happened, new actions might arise, and secondary phenomena, such as the transformation of ores, *without change of form*, which are otherwise very difficult to understand; lateral rents might also be filled by virtue of these new actions, even though they were not in the most favourable lines of electrical circulation.

The general hypothesis being admitted, it appears to follow, that the observed influence of cross courses on the quality and abundance of particular accumulations of ore in the veins which they divide, affords strong ground to believe that, in such cases, the depositions of these ores was subsequent to the displacement of the vein fissure by the cross course. It appears to be Mr. Fox's opinion, that the clays in the flukans and cross courses were introduced mechanically, and that they affected, in a particular manner, the metallic distributions.

Not the least striking among the arguments in favour of Mr. Fox's electrical theory of mineral veins, is the fact, that he has formed experimentally many well defined metalliferous veins by voltaic currents, operating under circumstances expressly arranged in imitation of those which really occur in Cornwall. (See Reports of the Newcastle Meeting of the British Association, 1838.)

Recapitulation.

In considering these various views of the repletion of mineral veins, it must appear evident that some things at least are very probably established; the successive enlargement of some veins, the progressive repletion of most of them, and the influence of general polarities in