

years previously, from observing the deposition of specular iron on the crust of a stream of lava flowing down the side of Vesuvius ; and he was induced, from that circumstance, to institute an investigation of the subject with reference to the following questions : —

First, Is there, near each of the known metalliferous deposits, any unstratified rock ?

Secondly, If none is to be found in the immediate vicinity of such deposits, is there no evidence, derived from the geological constitution of the district, which would lead to the belief that an unstratified rock may extend under the metalliferous district, and at no great distance from the surface of the country ?

Thirdly, Do there exist metalliferous deposits entirely disconnected from unstratified rocks ?

With respect to the first of these questions, the author showed, by copious references to England, Scotland, Ireland, Norway, France, Germany, Hungary, the Southern Alps, Russia, and the northern shores of the Black Sea, that the great mining districts of all these countries are immediately connected with unstratified rocks : and in further support of this solution of the first question, he mentions the metalliferous porphyries of Mexico, and the auriferous granite of the Orinoco ; but he observes, that his knowledge of the mining countries of South America is not sufficient to enable him to state their general geological connection. Locally, this truth is well known. Mr. R. Fox, in his excellent summary of facts regarding the veins of Cornwall, observes:—“The copper and tin mines are generally situated at or near some of the junctions of the granite and killas, or of killas and elvan,” &c. : and both of these metals have been found in great abundance in each of these rocks ; and it is, perhaps, difficult to decide in which of them either metal has, upon the whole, predominated.

With reference to the second question, — the probable association of metallic veins with unstratified rocks, though the latter are not visible in the immediate neigh-