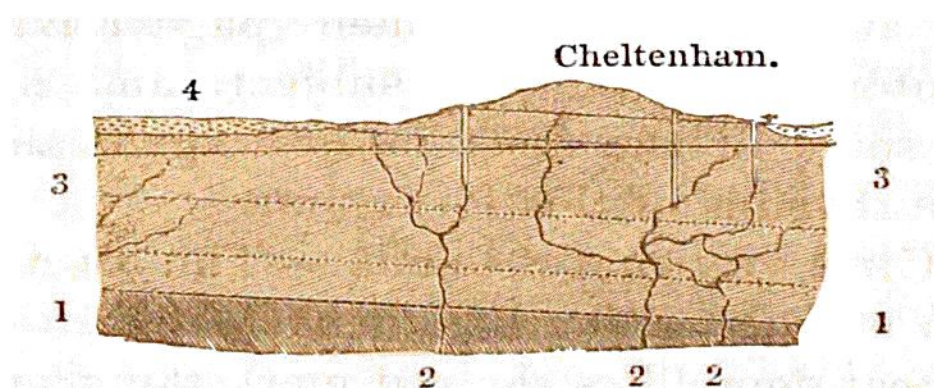


discovered in modern marine productions, did not also exist in mineral salt-waters, issuing from strata that were formerly beneath the sea. The red mar



TAB. 89.—SECTION OF THE LIAS AT CHELTENHAM.

(By Mr. Murchison.)

1, 1. Red marl. 2, 2, 2. Origin of the Cheltenham waters. 3, 3. Lias marls. 4. Alluvium.

is the source whence the waters derive their saline properties, but, as the springs pass through the lias marls, which are full of iron pyrites or sulphate of iron, certain chemical changes are effected, and the waters acquire their celebrated medicinal qualities. From the decomposition of the sulphate of iron which takes place, a vast quantity of sulphuric acid must be generated, which reacting on the different bases of magnesia, lime, &c. forms those sulphates so prevalent in the higher or pyritous beds of the lias, the oxide of iron being at the same time more or less completely separated. By this means the mineral waters, which are probably mere brine-springs at the greatest depths, acquire additional and more valuable properties as they ascend to the