

## CHAP. VIII.

## MINERAL VEINS.

WERNER, in his valuable treatise on veins, distinguishes between "true veins" and some other appearances which he thinks undeserving of the title. "Veins" he declares to be particular mineral repositories, of a flat or a tabular shape, which in general traverse the strata of mountains, and are filled with mineral matter differing more or less from the nature of the rocks in which they occur. They cross the strata, and have a direction different from theirs; they are rents which have been formed in mountains, and have been afterwards filled up by mineral matter.

In this definition, rock dykes are included, and it sometimes happens that those dykes are metalliferous; but the substances associated with tin, copper, lead, and the other minerals for which veins are valued, are usually quite different from the matter of rock dykes. Felspar and augite, so common in trap rocks, are almost unknown in metalliferous veins, which contain, in fact, few silicates of any kind, though quartz (of a peculiar aspect) is very frequent therein. Besides the metals, in combination with sulphur, carbonic acid, &c., salts of lime and barytes abound, and clays of different qualities appear.

Thus the distinction between rock veins and rock dykes is in their contents; and since we find both in the same districts, in similar fissures, and under similar circumstances, this difference is of such importance, that, however strong may be the arguments which tend to show that mineral veins are the result of igneous action among the masses of the globe, we cannot fail