

epoch. These formations being developed on a very large scale in connexion with the baser metals, more especially iron, have been a long time known and worked. But there are allied with these, certain eruptive rocks, in which the metal does not form a special deposit, such are the "*traps*" and "*serpentines*" in which gold and platinum and associated metals are disseminated in fine particles; such also is the *jacotinga* of Brazil, which consists mainly of specular iron, mixed with sulphuret of iron, magnetic pyrites and quartz, through which gold is equally diffused. REGULAR deposits are veins which may be either *segregated*, *gash*, or *fissure*. Whitney defines a vein to be "an aggregation of mineral matter, of indefinite length and breadth, and comparatively small thickness, *differing in character from, and posterior in formation to, the rocks which inclose it.*"

*Plutonic* veins, are fissures filled with matter which has been forced in a plastic state from *below* upwards.

*Sedimentary* veins, are fissures filled from *above*, by deposition of mineral matter, in a manner similar to that in which the sedimentary rocks have been formed.

*Stalactic* veins, or veins of infiltration, result from the filling of fissures, by incrustation of the sides with calcareous matter deposited from aqueous solution.

The results of all these actions may be exhibited in the same fissure.

*Segregated* veins are gangues, which do not seem to occupy a previously existing fissure, but in which the metallic and mineral substances have been gradually eliminated from the surrounding formations, most probably by electro-magnetic action, or by chemical. They usually lie *parallel with the cleavage planes* of the formation in which they occur, the