In the accompanying diagram, L may represent limestone, P plate, G gritstone. The joints in L are generally rectangular to the bed (in thin-bedded limestones L', the joints are more numerous.)

In plate they are often oblique to the bed; in gritstone less regularly formed, being mostly cracks: this is especially the case where the

beds are thick. The principal fissures F, which sometimes go through many beds, are most open and regular in the limestone.

Coal has sometimes joints of the same kind, (called

'ends' or 'backs,') and, in addition, a minute fissility, generally in one certain direction across the bed, which

does not occur in the shales above or below. It is a sort of crystallisation. Ironstone sometimes shows concentric laminæ, and often sparry divisions, when it becomes a septarium.

A very singular structure is frequently noticed in the argillaceous iron ores of a coal district, without however



being peculiar to them, which is represented in *fig.* 49. The substance of the iron ore is formed into conical sheaths, involving one another, and marked by concentric



