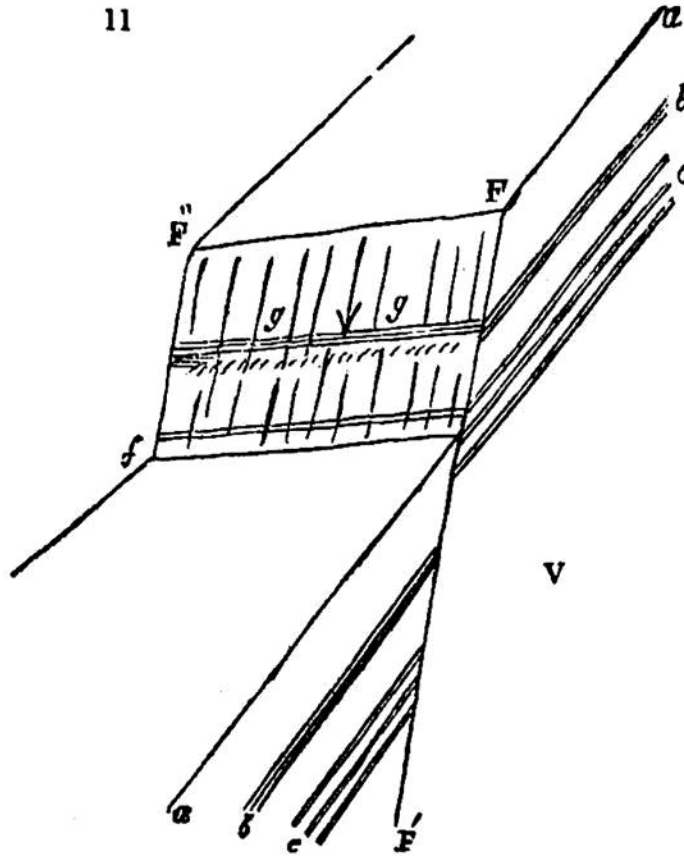


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seen at Cullercoats in the great Tynedale, or 90 fathom dyke, of the Newcastle Coalfield.

Extent and Frequency of Faults.

The extent of vertical displacement occasioned by faults varies from a few inches or feet to thousands of feet; examples of the former are common, of the latter rare. When carefully studied, however, the principal difference between them—the extent of the movement, is the only one which appears constant and essential. This is obviously related to the force employed in producing the fracture. That force may have been different in amount in the two cases contrasted, or different in the duration of its exertion; for the conformity of the circumstances of fracture seems to forbid a supposition of a different mode of action. Now, as an examination of the smaller and larger faults, when their planes can be clearly seen, appears to show that only one kind of action has been impressed upon the masses, as they appear to have slid in one direction, have been rubbed