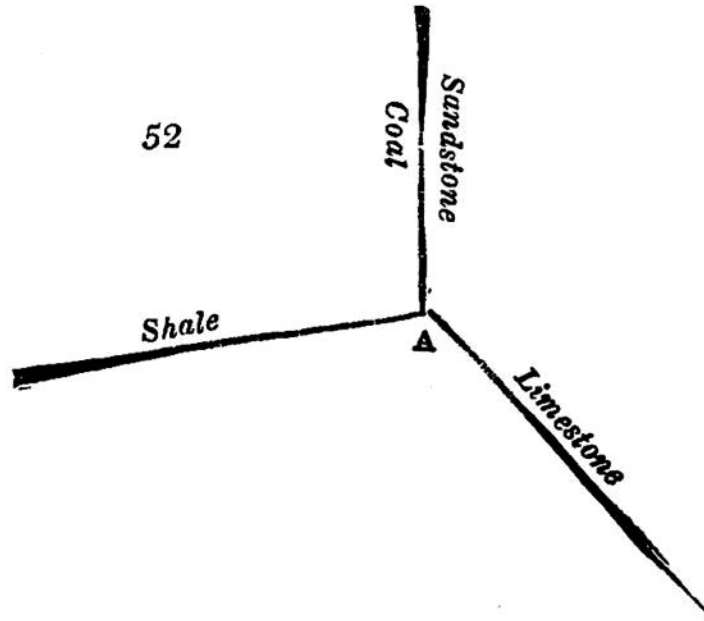


Thus to any point A, in diagram No. 52., where a series of limestone, sandstone, shales, coal, ironstone, occurs,



the limestone may be supposed to have been brought by diffusion in the ocean from an area situated to the south-east; the shale transported from the west, and the sandstone, plants, &c., drifted from the north. We may *imagine* two rivers, one flowing from the west, and bringing across the regions where now are Ireland, Lancashire, Derbyshire, and South Yorkshire, a vast body of argillaceous sediments, slightly charged with sand, and but little varied by floating trees and plants; the other rushing from the north, loaded with sandy matter, and bearing abundance of trees of different kinds, *but not many ferns or delicate herbaceous plants*. Alternately or contemporaneously, these rivers might fill the sea with deposits, such as we behold and in the manner that we see them, united with the proper calcareous deposit of the ocean.

This explanation of different sediments coming to the same part of the sea from various quarters, may probably be applied to every system of stratified rocks, containing, as constituent members, limestone, sandstone, and clay; but it is necessary previously to investigate the directions in which the agencies concerned in producing each sort of sediment, were most powerful; *i. e.* the points or lines of their greatest intensity.