

accompanied with the subsidence of one part of a mass and the elevation of another. This is exemplified in the section of the carboniferous strata, (Tab. 32, *e, f, g, h,*) where the layers, or seams of coal, have been shifted to a higher level, although both sides of the rock remain in apposition; *f* marks the line of fault. Stratification, in fact, may be compared with the operation of erecting a building; strata of clay being comparable to beds of mortar, those of harder rocks to layers of brick; while the fissures, veins, and faults are analogous to the cracks, sinkings, and displacements produced by the settling of different portions of the whole edifice.

7. CHRONOLOGICAL ARRANGEMENT OF THE STRATA.—In the ancient alluvial beds of gravel, sand, and marl, containing the remains of gigantic mammalia, which formed the principal subject of the last lecture, but few indications of stratification occur; those deposits, for the most part, bearing the character of materials transported by the sea or by river currents, or accumulated in estuaries, and thrown up in bays and creeks by the waves, rather than that of tranquil depositions. The formations which succeed, we shall find composed of regularly stratified rocks, but interspersed here and there with alluvial debris. The plan of the strata before you (Plate 7) is intended to present a general view of the various systems of rocks, from the most recent to the most ancient. For more detailed explanations and sections, reference