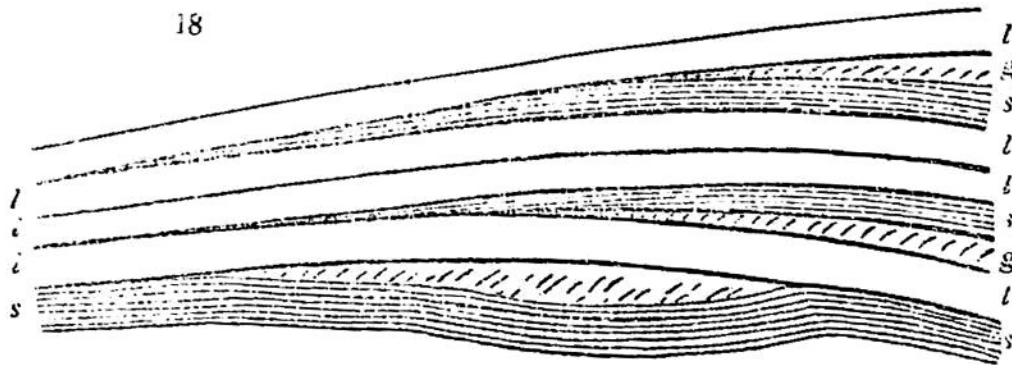


*Varieties of Stratification.*

Stratified rocks are either of *equal* thickness over a large extent of country, or *attenuated* to a wedge shape in some one direction, or decreasing in thickness every way from a certain point or district, so as to constitute a *lenticular* formation. Strata of one certain kind of rock, which are, in some places, accumulated into a uniform mass, become divided in other districts, and separated into distinct members by the interposition of wedge-shaped deposits. All these circumstances are represented in the annexed diagram (*fig. 18.*), where



limestone strata are marked *l*, slate beds *s*, gritstone *g*; the gritstone and slate being in lenticular or wedge-shaped, and limestone in parallel, beds, divided in one direction, but conjoined in the other.

By observations of this kind in certain districts (*e. g.*, in the north of England, along the Penine chain, and on the Yorkshire coast), it has been inferred, that the different strata of limestone, shale, and grit, have originated under different circumstances; the former being an oceanic deposit, but the two latter substances derived from the waste of ancient lands bordering on the sea in which the limestone was formed. This conclusion is strongly corroborated by the fact, that it is chiefly or wholly in gritstones and shales that land plants occur, while the marine exuviae of shells, corals, &c. abound almost exclusively in the limestones.

The term stratum or layer is of general signification, and independent of the absolute thickness of the mass: