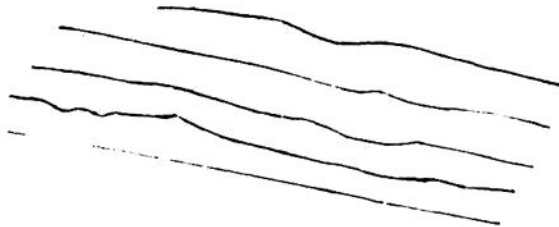


know the constitution of the whole globe. If the surface be bored through in different places, the same number of beds will not be found in any two, nor will they generally have the same character; and if they should be at any distance from each other, that rock which is most abundant in one place may be absent in another, which could not be the case if the beds were regularly arranged one over another, extending round the whole globe.

But still it is true, in a more general sense, that rocks have an undeviating order. There are two mineral substances well known to everybody, chalk and coal; and chalk is always above coal in the order of rocks. It would be foolish to search for chalk at Newcastle, for in no instance has it been found beneath the coal-beds. So, again, Portland stone, used for building, could not be found in a country where coal is found on the surface. It is supposed by many persons that coal may be obtained upon Blackheath, in the vicinity of London; but the geologist is quite certain that it cannot, for the beds in that district belong to a formation considerably above that with which coal is associated. It would therefore appear that, as a general principle, rocks are always found in a certain relative position, but it is not true in particulars. In all the most characteristic and important rocks the rule may be depended upon, in those of small extent and of a secondary character it cannot. A geologist could not assert that a bed of clay or sand would be found beneath the surface at any place, but he could tell whether coal, building-stone, or chalk might be expected.

STRATIFICATION OF ROCKS.

Rocks may be divided into two classes, stratified and unstratified; the greater number belonging to the former class.



Stratified Beds.

Strictly speaking, a stratum is a bed of rock having two parallel faces. If a bed be placed in a flat or horizontal position