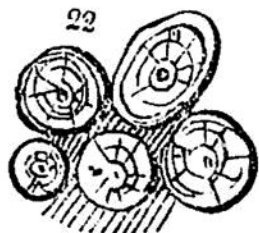


shale, as in *fig. 21*. Such nodules are frequently traversed by plates of calcareous spar, and these receive the name of *septaria*.

In limestone beds the nodules of chert, in chalk the nodules of flint, often appear to have been aggregated round some previously solidified sponge, coral, or shell. This process of accretion round a nucleus is beautifully exemplified in certain "oolitic" limestones, so called from their being composed of spherical grains. Each of these consist of several concentric coats, collected round a previously solidified body, as a minute grain of sand, fragment of shell, or other centre of attraction. Radiating fibres frequently cross the spherical shells.



Something of this concretionary structure appears in particular unstratified rocks (as pitchstone); but in general all the appearances previously described belong to the stratified formations exclusively.

Divisional Structures.

All rocks are traversed by divisional planes of less or greater width and frequency, and thus divided into masses of definable shapes and proportions. These "joints," as they are often called, present themselves under a great variety of appearances, but almost always such as to be intelligible on the supposition of the mass of the rock having been *contracted*, so as to separate into prismatic and other forms, as clay, starch, &c. contract and split by drying.

The joints vary in their combination, so as to produce masses of different forms in rocks of different nature: they also vary in rocks of the same nature which are of different antiquity: their frequency and regularity also depend upon the mineral aggregation of the rock: it is further probable that they are somewhat complicated with additional fissures, near axes and centres of elevation or depression of rocks.