

formations, and, at the same time, any portions of the granite which might have reached them.

Granite frequently occurs in the central parts of mountain-chains; sometimes it forms there a kind of core to the various gneisses, schists, and other crystalline rocks. It appears in large eruptive bosses, which traverse indifferently the rocks on the line of which they rise, and commonly send out abundant veins into them. Sometimes it even overlies schistose and other rocks, as in the Piz de Graves in the upper Engadine, where a wall-like mass of granite, with syenite, diorite, and altered rocks, may be seen resting upon schists.⁵ In the Alps and other mountain ranges, it is found likewise in large bed-like masses which run in the same general direction as the rocks with which they are associated.

Reference has already been made (p. 273) to some of the more marked varieties of texture and structure in granite bosses. To a few of these further and more detailed remarks may be appropriately inserted here. The patches or inclosures in granite, which differ in color, texture, and composition from the general mass of the rock, may be grouped in two divisions: 1st. Angular or subangular fragments, probably in most cases derived from the rocks through which the granite has been protruded. These are sometimes tolerably abundant toward the outer margin of a boss. They usually show considerable contact-metamorphism, due no doubt to the influence of the eruptive rock in which they are inclosed. 2d. Globular or rounded concretions, due to some process of segregation and crystallization, in the original still unconsolidated granite. Examples of this nature occur in the Cornish and Devon granite, as in

⁵ Studer, "Geologie der Schweiz," i. p. 290.