slate;—gneiss has often a waved form. This rock has been represented as stratified, I conceive, by a mistake, in confounding the stratified with the slaty structure: the latter is occasioned by the quantity of mica, and sometimes of talc which it contains, and is the effect of crystallization.*

Beds of crystalline limestone, and of hornblende rock, occur in gneiss. It contains most of the metallic ores, both in veins and beds. Crystals or garnets are frequently interspersed in gneiss, but are more common in micaceous schist, which is nearly allied to this rock.

In many parts of the world, the declivities of granite mountains are covered by rocks of gneiss. Gneiss constitutes the principal rock formation in a considerable part of Sweden. It occurs in Scotland and Ireland, but is scarcely known in any part of England or Wales. Very well characterised gneiss occurs in the vicinity of Aberdeen. An imperfectly formed gneiss is found on the Malvern Hills. I have also seen gneiss, brought from the lower part of Skiddaw in Cumberland. Mountains of gneiss, are not so steep and broken as those of granite, and the summits are generally rounded.

Mica-slate, or *Micaceous Schistus*, is frequently incumbent on gneiss, or granite, and covered by common slate: it passes, by gradation, into both these rocks—the coarser grained resembling gneiss, and the finer kind, by insensible transition, becoming clay slate.

Mica slate is composed essentially, of mica and quartz, intimately combined; the felspar, which is a principal constituent part of granite and gneiss, occurs, only occasionally, in irregular masses in this rock. The colour of mica slate is, generally, a silvery or pearly white, inclining to a bluish grey or a light green; it is sometimes nearly black, and when weathered, is generally yellow. I have a specimen of mica slate from North America, which has the purple colour of the amethyst; but such deviations from the common colours are rare.

Crystals of garnet are frequently disseminated in mica-slate: it contains, occasionally, crystals of other minerals. It has a slaty structure, and is, often waved and contorted, and divided by thin laminæ of quartz. It, sometimes, contains beds and laminæ of crystalline limestone, or is intermixed with serpentine. Frequently also mica slate, contains beds and veins of metallic ores. The gradation of mica slate into gneiss and clay slate, and the transition from granite to mica-slate, may be seen distinctly in some of the rocks near Bray, in the county of Wicklow in Ireland, where I observed that the beds of mica-slate adjoining the granite, are traversed by nume-

* The partings or divisions in rocks, which may be properly denominated rents are distinct from those which are the effect of crystallization, and may be distinguished by their irregularity and roughness, and the indeterminate manner in which they intersect the stone. Some partings have evidently been the result of mechanical causes.