present no appearance of regular arrangement, but occur in amorphous or shapeless masses, or as dikes and veins filling up fissures in pre-existing rocks, or interpolated between regular strata.

9. MICA SCHIST AND GNEISS.—The stratified metamorphic rocks consist of two well defined groups. The first, or uppermost, is *mica schist*, a slaty rock, abounding in a mineral called *mica* (from its glittering appearance), and *quartz*, a substance with which you are acquainted in the form of rock crystals, and of the semi-transparent pebbles common in most beds of shingle or beach. These two minerals are disposed in alternate layers, forming laminated beds, which are extremely contorted and undulated. The upper divisions of the series bear a considerable resemblance to the argillaceous schists; the lower are of a more quartzose character, probably from having been subjected to a greater degree of igneous action.

The *Gneiss** system consists of contorted and laminated beds of quartz, felspar, and mica, irregularly stratified; which may, in truth, be regarded as stratified granite, for the same substances enter into their composition, as prevail in the amorphous masses of that rock. The gneiss is often found associated and alternating with mica schist, quartz-rock, clay-slate, and a very hard granular rock, called primary limestone. The whole series of stratified metamorphic beds may therefore be con-

* A German mining term.