tend to the development of successive spheroidal shells, which might remain mutually adherent and invisible in a fresh fracture of the rock, yet might make their presence effective during the complex processes of weathering." After some exposure, the spheroids of basalt begin to appear, and gradually crumble away by the successive formation and disappearance of external weathered crusts or coats, which fall off into sand and clay. Almost all augitic or hornblendic rocks, with many granites and porphyries, exhibit the tendency to decompose into rounded spheroidal blocks. The columnar structure, though abundant among modern volcanic rocks, is by no means confined to these. It is as well displayed among the lavas of the Lower Old Red Sandstone, and of the Carboniferous Limestone in central Scotland, as among those of Tertiary age in Auvergne or the Vivarais.

As already stated, prismatic forms have been superinduced upon rocks by a high temperature and subsequent cooling, as where coal and sandstone have been invaded by basalt. They may likewise be observed to arise during the consolidation of a substance from aqueous solution. In starch, for example, the columnar structure may be well developed, and not infrequently radiates from certain centres, as in basalt and other igneous rocks.

3. In Foliated (Schistose) Rocks.—The schists likewise possess their joints, which approximate in character to those among the massive igneous rocks, but they are on the whole less distinct and continuous, while their effect in dividing the rocks into oblong masses is considerably modified by the transverse lines of foliation. These lines play somewhat the

¹¹ Bonney, Q. J. Geol. Soc. 1876, p. 151. The perlitic structure is probably a microscopic example of the same kind of contraction.