or diabase have been intruded among the Lower Carboniferous formations. One horizon on which they are particularly abundant lies about the base of the Carboniferous Limestone series. Along that horizon, they rise to the surface for many miles, sometimes ascending or descending in geological position, and breaking here and there abruptly across the strata.[15] There can be little doubt that they have actually melted down some parts of the stratified rocks, particularly the limestone.[16] Considerable petrographical differences occur among them, which may perhaps be in some measure due to the incorporation of such extraneous material into their mass. Gaps occur where these intrusive rocks do not rise to the surface, but as they resume their position again not far off, it may be presumed that they are really connected under these blank intervals. In the Inner Hebrides huge bosses of gabbro occur as well as granophyre and other acid rocks in the midst of the Tertiary volcanic series.

Mr. G. K. Gilbert has described, under the name of "laccolite," a structure in the Henry Mountains in Southern Utah, which is probably not uncommon in denuded volcanic districts. Large bosses of trachytic lava have risen from beneath, but instead of finding their way to the surface, have spread out laterally and pushed up the overlying strata into a dome-shaped elevation (Fig. 283). Here and there, smaller sheets proceeding from the main masses have been forced between the beds, or veins have been injected into fissures, and the overlying and contiguous strata have been considerably metamorphosed.[17]

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[15] Trans. Roy. Soc. Edin. xxix. p. 476.

[16] See Dr. Stecher's papers, quoted postea, pp. 937, 1013.

[17] "Geology of the Henry Mountains," U. S. Geog. and Geol. Survey, Washington, 1877. A similar structure was figured and described by C Mac-