Part IV. Curvature[1]

A little reflection will show that though, so far as regards the trifling portions of the rocks visible at the surface, we might regard the inclined surfaces of strata as parts of straight lines, they must nevertheless be parts of large curves. Take for example the section in Fig. 240. At the left hand the strata descend beneath the surface at an angle of no more than 15°, but at the opposite end the angle has risen to 60°. There being no dislocation or abrupt change of inclination, it is evident that the beds cannot proceed indefinitely downward at the same angle which they have at the surface, otherwise they would run away from each other, but must bend round to accommodate themselves to

Fig. 240.—Section of inclined strata.

the difference of inclination. By prolonging the lines of bedding for some way beneath and above sea-level, we can show graphically that the strata are necessarily curved (Fig. 241). A section of this kind brings out clearly the additional fact that an upward continuation of the curved beds must have been carried away by the denudation of the surface. In every instance therefore where, in walking over the surface, we traverse a series of strata which gradually, and without dislocations, increase or diminish in inclination, we cross part of a curvature in the strata

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[1] A useful compendium of information regarding geological terms for the dislocations and curvatures of rocks has been prepared by M. E. de Marjerie and Prof. A. Heim, "Les dislocations de l'ecorce terrestre," 1888, Zürich (in French and German).