

place the clinometer strictly parallel with the direction of dip, or, if this be impossible, to take two measurements, and calculate from them the true angle.<sup>1</sup> Simple as observation of dip is, it is attended with some liabilities to error,

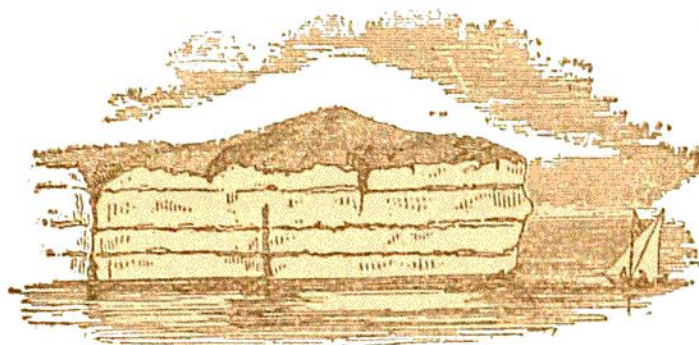


Fig. 234.—Apparently horizontal strata (B.).

against which the observer should be on his guard. A single face of rock may not disclose the true dip, especially if it be a clean-cut joint-face. In Fig. 234, for example, the strata might be supposed to be horizontal; but another side

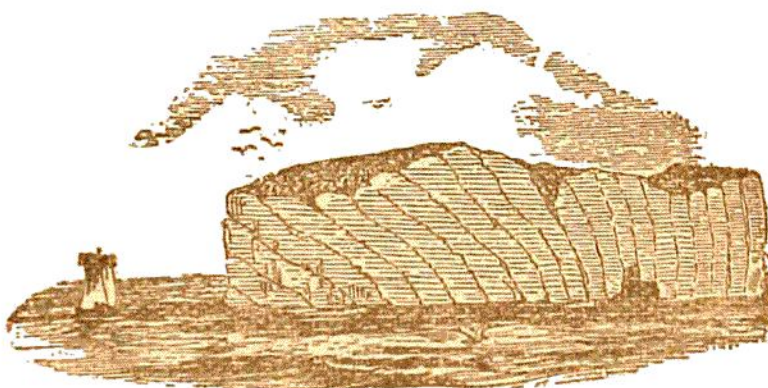


Fig. 235.—Real inclination of strata shown in Fig. 234 (B.).

view of them (as Fig. 235) might show them to be gently inclined or even nearly vertical.

Again, a deceptive surface inclination is not infrequently to be seen among thin-bedded strata. Mere gravitation,

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<sup>1</sup> In Jukes's "Memoir on the South Staffordshire Coal-Field," in *Memoirs of Geol. Survey* (2d edit. p. 213), a formula is given for calculating the true dip from the apparent dip seen in a cliff. A graphical method of computing the true dip from observations of two apparent dips has been suggested by Mr. W. H. Dalton, *Geol. Mag.* x. p. 332. See also Green's "Physical Geology," 1882, p. 460. A. Harker, *Geol. Mag.* 1884, p. 154.