

the axis, in the township of Landsdown and elsewhere where the Potsdam types of fossils are found associated with types characteristic of the Calciferous, the portion of the bed in which they occur may justifiably be considered as a transitional phase in a horizontal as well as a vertical direction towards the latter formation. To make the proposed tentative interpretation clearer, Fig. 4 diagrammatically represents a portion of an ellipsoidal basin in which deposition, accompanied by slow depression of the oldland surface, has been going on for some time. The earlier shore lines are shown in cross-

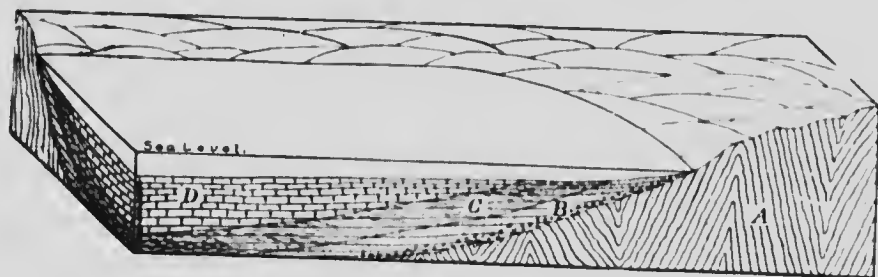


FIGURE 4.

section at the points where the younger strata overlap them to rest upon the crystalline area. Subsequently in the history of the basin the land may rise somewhat, and may be even slightly tilted, and the sea withdraws. During the progress of degradation the greater portion of the sediments are removed; but suppose small remnants of these are still to be found, it can readily be seen that a small portion of the shales or limestones of, say, bed number five might be left along the front of the section of the basin, while towards the back a portion of the sandstone of bed number three remains in a protected hollow among the crystallines. It would be exceedingly difficult, if not impossible, to correlate the two, particularly if they were some miles apart. But since the sandstones beneath the remnant of bed number five are identical in composition with the remnant of bed number