

in fissures up which hot water rises.⁸ Each of these modes of origin may in different cases have occurred. It is almost certain, from what we now know of the diffusion of metallic substances, that there must be a decomposition of the rocks on either side of a fissure, perhaps to a great distance, and that a portion of the mineral matter abstracted will be laid down in another form along the fissure-walls. If, on the other hand, the rocks on either side of the fissure are permeated for some distance by hot ascending waters, holding such metalliferous solutions as have been detected in the

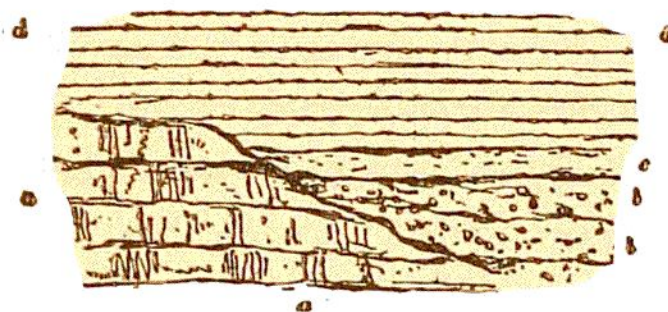


Fig. 322.—Unconformability among horizontal strata. Lias resting on Carboniferous Limestone, Glamorganshire (B.).

hot springs of California and Nevada, some of the dissolved mineral substances will doubtless be deposited in the fissure, and may even be introduced into the pores and cavities of the adjacent rocks.⁹

PART X. UNCONFORMABILITY

Where one series of rocks, whether of aqueous or igneous origin, has been laid down continuously and without disturbance upon another series, they are said to be *conform-*

⁸ See J. A. Phillips, Q. J. Geol. Soc. xxxv. p. 390.

⁹ Henwood, Address. Roy. Inst. Cornwall, 1871. J. A. Phillips, Phil. Mag. November, 1868, December, 1871, July, 1873, March, 1874; "Ore Deposits," 1884, p. 73. J. S. Newberry, School of Mines Quarterly, New York, March, 1880. J. A. Church, "The Comstock Lode," 4to, New York, 1879. Sterry Hunt, "Chemical and Geological Essays," 1875, p. 183. Brough Smyth's "Gold-fields of Victoria," Melbourne, 1869. F. Sandberger, "Untersuchungen über Erzgänge," part i.