

crystals, and other minerals. In quarries of marble or calcinable stone, the divisions are filled with spar, gypsum, gravel, and an earthy sand, which contains a great quantity of chalk. In clay, marles, and every other kind of earth, excepting turf, these perpendicular divisions are either empty or filled with such matters as the water has transported thither.

We need seek very little further for the cause and origin of those perpendicular cracks. The materials of which the different strata are composed being carried by the water, and deposited as a kind of sediment, must necessarily at first contain a considerable share of water, which as they began to harden they would part with by degrees, and as they must necessarily lessen in the course of drying, that decrease would occasion them to split at irregular distances. They naturally split in a perpendicular direction, because in that direction, the action of gravity of one particle upon another has no actual effect, while on the contrary it is directly opposite in an horizontal situation; the diminution of bulk therefore could have no sensible effect but in a vertical line. I say it is the diminution by drying, and not the

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