Highlands arises from the inability geologists have hitherto experienced of drawing, amid the perplexities of these convolutions, a base line for the whole; and from the further circumstance that, for great distances together, so completely vertical are the strata, that the ascending cannot be dstinguished from the descending direction. On visiting the Pentland range of hills for the first time, many years ago, there was nothing which so impressed me as that vertical position in which I invariably found the Grauwacke slates of the district. Forming the fundamental rock on which all the other rocks, sedimentary or igneous, had been in succession cast down or erupted, I saw it assuming the appearance of a foundation of piles, and presenting to even the very oldest of them, — the Old Red conglomerate, — its upturned edges. This vertical Grauwacke, I said, must have assumed its present character and position, — nay, must have presented all its present marks of great antiquity, — at a time when the materials of the conglomerate existed at the bottom of an Old Red Sandstone ocean, as beds of unfixed water-rolled pebbles, mixed with loose sand. Nor is it easy, surely, to affix limits to the tremendous potency of the earth-tempest that must have originally raised it, over so extensive an area, from the horizontal to the vertical position. Unacquainted at the time with the experiments of Sir James Hall, I was reminded, during my visit, of a phenomenon which I had witnessed when a boy, many years before, but which now came to assume in my memory a new character as an illustration. A severe long protracted frost had just broken up, and the lower reaches of the Cromarty Frith were covered by immense floats of ice, which had formed in its upper flats and shallows; when one of those dead calms which in our climate in the winter season so frequently herald a storm was disturbed by a smart breeze from the south-east, and the loose floats borne oceanwards by the tide were drifted back, from between the