

lower ranges surrounding the chain on the east, south, and west : in the last direction, however, they make a considerable deflection, receding from the Penine chain and again approaching it. This is occasioned by the intervention of the Cumbrian group, round which they bend like the subjacent carboniferous limestone.

In the middle regions of this chain, the strata form a regular saddle, dipping east and west ; but this regularity is disturbed, by what must be considered as faults of very astonishing magnitude, at the two extremities ; for on the north, the strata continue to crop out to the very edge of the chain towards the west ; the transition rocks, on which the whole rests, appearing at the foot of the escarpment, beyond which (instead of a regular repetition of the same series dipping in a contrary direction as from the axis of the chain) shattered traces of the coal-formation only are found, immediately succeeded and overlaid by horizontal deposits of new red sandstone : this part of the chain will be the object of more particular description hereafter. Towards the south, according to Farey, a derangement somewhat similar, though less enormous, has affected the strata of Derbyshire and Staffordshire, where the limestone tract exhibits on the west, by successive croppings out, its lowest strata ; against which the highest strata of the millstone-grit directly abut. The structure, however, of this part of the chain, requires further examination. The general inclination of the strata composing this chain, is not very considerable, excepting where affected by local derangements, and does not usually exceed three or four degrees ; presenting in this respect an exception to the highly elevated position more usually characterising the beds of this formation.

The features of this chain are often very wild and picturesque : it exhibits all the scenery and accompaniments of a considerable mountain range ; precipices, torrents, and cataracts. The caverns, cliffs, and rocky dales of Ingleborough and the Peak, are too well known to need description. Two facts observed in the moorlands of Staffordshire will serve to illustrate the depth of the ravines and abrupt escarpment of the mountains in that part of the chain. The Sun, when nearest the tropic of Capricorn, never rises to the inhabitants of Narrowdale for nearly a quarter of a year ; and during the season when it is visible, never rises till one o'clock p. m. : on the other hand, at Leek, the Sun is, at a certain time of the year, seen to set twice in the same evening, in consequence of the intervention of a precipitous mountain at a considerable distance from the town ; for after it sets behind the top of the mountain, it breaks out again on the northern side, which is