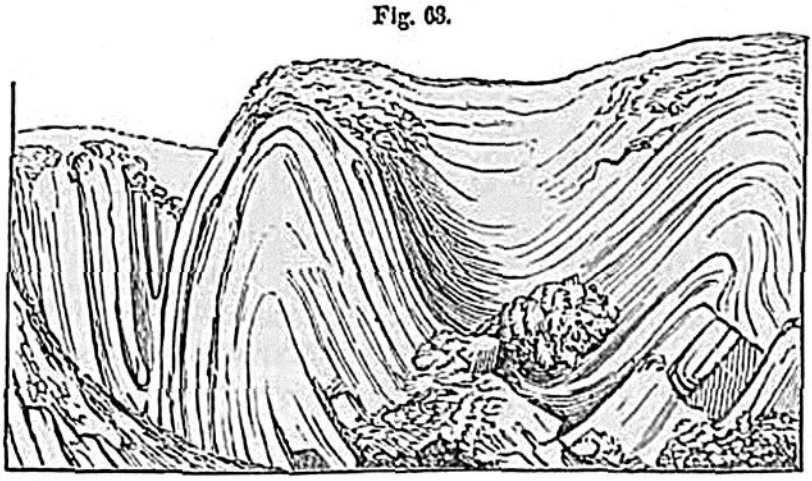
on the east coast of Scotland, where the rocks consist principally of a bluish slate, having frequently a ripple-marked surface. The undulations of the beds reach from the top to the bottom of cliffs from 200 to 300

Fig. 63.

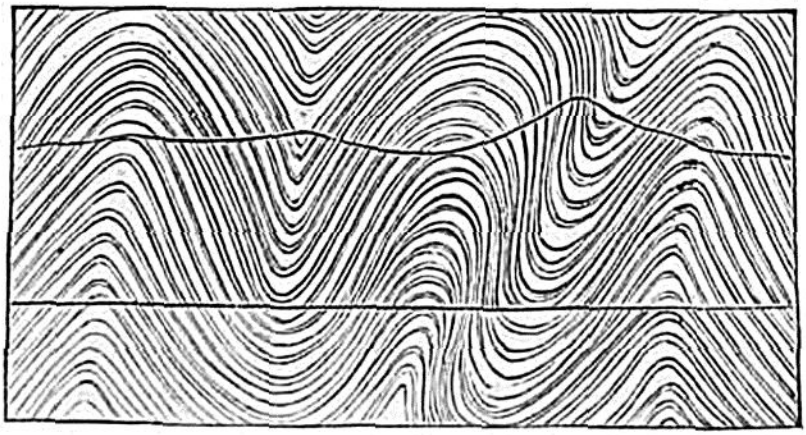


Curved strata of slate near St. Abb's Head, Berwickshire. (Sir J. Hall.)

feet in height, and there are sixteen distinct bendings in the course of about six miles, the curvatures being alternately concave and convex upwards.

An experiment was made by Sir James Hall, with a view of illustrating the manner in which such strata, assuming them to have been originally horizontal, may have been forced into their present position. A set of layers of clay were placed under a weight, and their opposite ends pressed towards each other with such force as to cause them to approach more nearly together. On the removal of the weight, the layers of clay were found to be curved and folded, so as to bear a miniature resemblance to the strata in the cliffs. We must, however, bear in mind, that in the natural section or sea-cliff we only see the foldings imperfectly, one part being invisible beneath the sea, and the other, or upper portion, being supposed to have been carried away by *denudation*, or that action of

Fig. 64.



water which will be explained in the next chapter. The dark lines in the accompanying plan (fig. 64) represent what is actually seen of the strata in part of the line of cliff alluded to; the fainter lines, that por-