

## CHAPTER XIX.

*Cleveland.—Ridges of Sand and Gravel along the Southern Coast of Lake Erie.—Their Origin.—Fredonia, Streets lighted with natural Gas.—Falls of Niagara.—Burning Spring.—Passing behind the Falls.—Daguerreotype of the Falls.—Boulder Formation of Whirlpool, and Valley of St. David's.—Glacial polishing and Furrows.—Influence of Icebergs on Drift.*

*June 3, 1842.*—THE morning after my arrival at Cleveland, Dr. Kirtland, the zoologist, took me to Rockport, about four miles to the west, and afterwards to the ravine of a torrent called the Rocky River, about six miles farther, in the same direction, that I might examine in both places what are here called the Lake Ridges. Like the "ridge road" of Lake Ontario before described (Vol. I., p. 24), they resemble ancient beaches, running parallel to the shores of Lake Erie, and being composed of sand and gravel.

At the point which I first visited, in the town of Rockport, Lake Erie is bounded by a perpendicular cliff (A, *fig. 10*), about seventy-five feet high, at the base of which the water is so deep, that, in some places, it can only be approached in a boat. Horizontal beds of shale, with some layers of sandstone, appear cut off abruptly in the face of this cliff, all referable to the Hamilton group, No. 10 of Map Pl. II., or the lowest part of the Devonian series (F). Proceeding from the summit of the cliff inland, we find the surface of the country covered with clay (*b*),