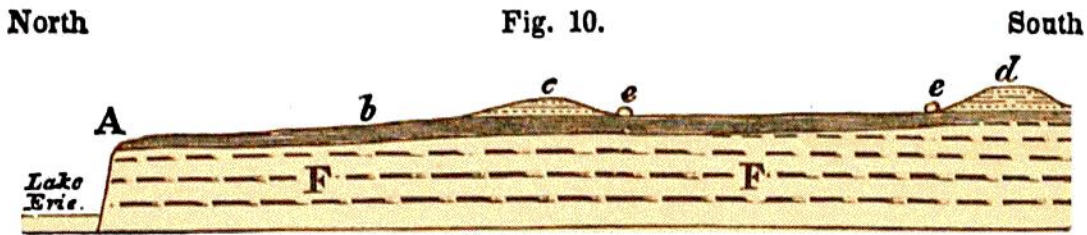


sloping gently, so that, in half a mile, there is a rise of about forty feet, and we then come to the bottom of the first or northernmost ridge (*c*), which is about fifteen feet high, rising at an angle of about 12° , both on its northern and southern slope. Between this and the next ridge (*d*), which is about half a



"Lake Ridges" near Cleveland, Ohio.

mile distant, extends a line of swamps and marshes, some of them several hundred acres in extent. Two other parallel ridges of sand and gravel are observable still farther inland or southwards, the distance of each varying greatly according to the general slope of the land, for the same ridge occasionally approaches within a mile of the shore at one point, and recedes to the distance of eleven miles from it at another, apparently preserving everywhere the same level.

Boulders of granite, some of them three feet in diameter, which must have come from the north side of Lake Erie, are scattered sparingly here and there as at *e*, *fig. 10*. I could not obtain any fossil shells from any of these ridges, although some are said to have been found, together with fragments of wood, similar to those now thrown up on the beach of the lake. The shells might at once decide the point whether the ridges are of marine or freshwater origin. If this were settled, another and distinct ques-