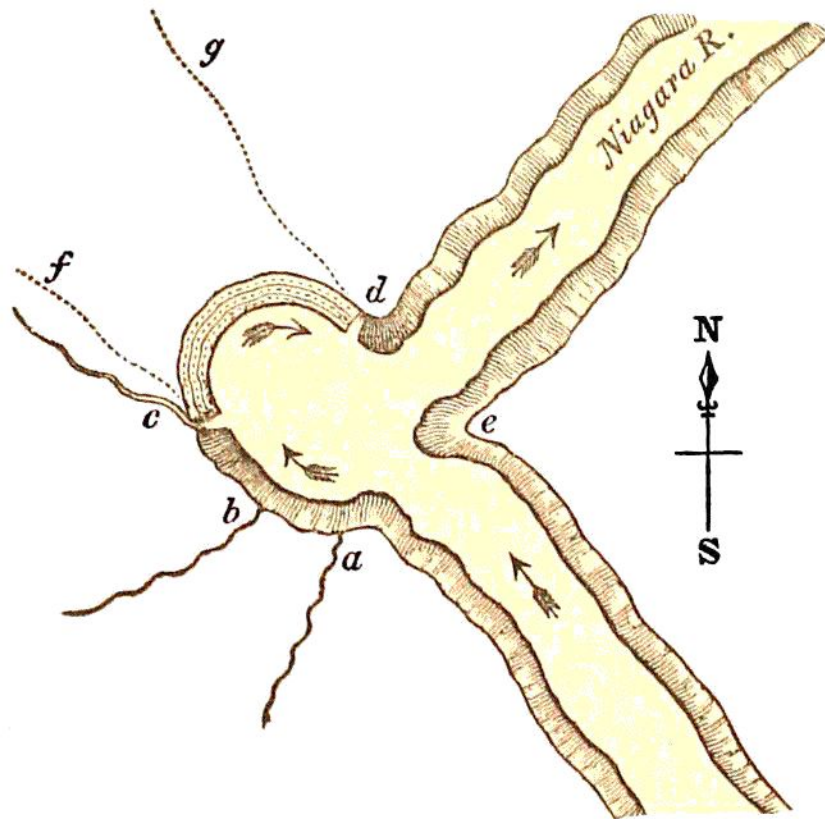


Fig. 11.



*Course of the Niagara at the Whirlpool.*

- a, b.* Streamlets which are thrown in cascades over the limestone precipice, after cutting through superficial red drift, twenty-five feet thick.
- c.* Bowman's Run.
- d.* Small gully, between which and *c* the cliffs consist of drift.
- e.* Summer house, where sand with fresh-water shells rests on the top of the precipice. See *fig. 3*, Vol. I., p. 40.
- f, g.* Probable course of the ancient valley, now filled with drift.

The river cliff, from *c* to *d*, or for a distance of about 170 yards, on the northern side of the whirlpool, consists exclusively of strata of sand, loam and gravel; the latter in parts cemented together into a conglomerate, and all belonging to the drift or boulder formation. The visible thickness of this modern deposit is about 300 feet, but we know not to what depth it may extend below the level of the Niagara. It appears clearly that there was here an original valley, which was afterwards completely filled up with stratified drift. The same red clay which