

the terrace building by gravel-bearing streams. This evidence is stronger when it is noted that both rock terraces and glacial terraces are at this point in the river somewhat higher than at Peekskill. The elevation of the glacial terraces at Peekskill is from 100 to 120 feet; in the vicinity of West Point it is from 160 to 180 feet. Unless there has been a differential postglacial uplift of the axis of the Highlands, this difference of level of terraces at points about 9 miles apart, appears too great to be explained by the normal tilting of the continent on the supposition that the deposits were originally made at the same water level. If made, however, in ice-confined waters, their difference of level is expectable.

In the view of the terraces at West Point and Cold Spring having been laid down marginal to ice filling the channel in the

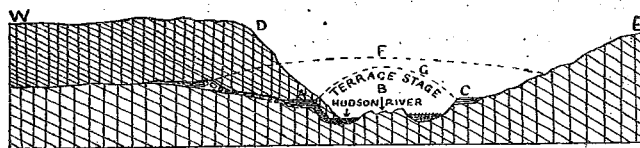


Fig. 11 Cross-section of the Hudson valley at the West Point stage. A, West Point terrace near cemetery; B, Constitution island; C, terrace south of Cold Spring; D, Crow's Nest mountain; F, ice at stage of the 400 foot moraine; G, ice at West Point terrace stage

manner of glaciers in the fiords of Norway, the lack of drift on Constitution island above referred to is at once explained, since it must have been at the time covered with ice, the cross-section of the gorge then being that shown in the annexed figure.

At Cold Spring on the south, facing Foundry cove, is a narrow terrace, rising about 40 feet above sea level.

Partial summary of preceding chapters. The front of the ice sheet retreating northward from the terminal moraine and up the Hudson valley halted temporarily at Tappan. The extension of the ice east and west of this locality is as yet imperfectly known. It certainly must have formed a broad sheet, rising on the north, over Little and High Tor, and filling the canyon of the Hudson in the Highlands if it did not also cover these last named elevations. Northward, the broad valley of the Hudson was still wrapped in the glacial sheet.

At Haverstraw and Croton, evidence exists of a temporary halt of the ice front, at a time when it had a rather marked convex